دانشگاه علوم پزشکی
و خدمات بهداشتی درمانی ایران

مرکز تحقیقات سوختگی دانشگاه علوم پزشکی ایران
BRC

کتاب خلاصه مقالات

یازدهمین کنگره کشوری سوختگی

۲۷–۲۸ بهمن ماه ۱۴۰۱

تهران، مرکز همایش‌های بین‌المللی رازی

ABSTRACT BOOK of

11th National Burn Congress

17-16 February, 2023

Razi Hall, Iran University of Medical Sciences,
Tehran, Iran

www.burn2023.ir

بسم الله الرحمن الرحیم

فهرست

پیام رئیس کنگره

همکاران ارجمند خوشوقتم که این توفیق حاصل شد که در یازدهمین کنگره سوختگی که در بهمن ماه سال ۱۴۰۱ در مرکز همایش های رازی با محوریت « دستاوردهای نوین دانش بنیان در سوختگی» برگزار می گردد در خدمت شما باشیم.

این کنگره به مانند تمام دوره های گذشته با مشارکت جدی همه صاحب نظران و مجربین در حوزه درمان سوختگی برگزار خوهد شد. با مروری بر شعارهای کنگره های سوختگی در طول سالیان گذشته متوجه خواهیم شد که آنها تقریباً به شکلی هدفمند برگزار شده اند. با توجه به محجور بودن سوختگی و نا آشنایی مسئولین، جامعه و حتی کادر پزشکی با مشکلات حوزه سوختگی ، در کنگره‌های سالهای اولیه سعی شد در قالب سمپوزیوم های آموزشی مخاطبان و گروه های هدف با معضلات فیلد سوختگی آشنا گردند. کنگره های بعدی بر روی روش های پیشگیری و درمان های جدید به ویژه روش های جراحی متمرکز شدند. در ادامه در کنگره ها مشکلات روانی، اجتماعی و بازتوانی در بیماران سوختگی مورد توجه قرار گرفت. متاسفانه از میانه برگزاری این کنگره ها تحریم ها ارایه خدمات سوختگی را به مانند حوزه‌های دیگر سلامت تحت تاثیر قرار دادند و منجر به ایجاد مشکلات جدی برای بیماران سوختگی گردیدند. لذا به نظر می رسد چاره ای نداریم به جز آنکه با توجه به استعداد های داخلی و وجود مراکز تحقیقات سوختگی در کشور از این توان بالقوه که در برخی مراکز بالفعل شده است استفاده نماییم . شعار این کنگره بر این مبنا انتخاب شد تا همکارانی که در سراسری کشور توانسته اند محصولاتی را برای افزایش کیفیت خدمات سوختگی تولید کنند فرصت داشته باشند آنها را به شرکت کنندگان ارائه نمایند. البته کنگره به مانند سال های گذشته با ارائه سخنرانی های آموزشی و مقالات به شکل حضوری و پوستر فرصتی را برای آشنایی همه عزیزان شرکت کننده جهت ارتقاء دانش خود فراهم خواهد نمود.امیدوارم این کنگره در نیل به اهداف پیش بینی شده موفق گردد.

در آرزوی دیدار همه شما عزیزان هستیم.

دکتر سید حمید صالحی
رئیس یازدهمین کنگره سوختگی

پیام دبیر علمی کنگره

بسمه تعالی

با سلام و احترام
به یاری خداوند یازدهمین کنگره سوختگی را که ماحصل بروزترین تحقیقات و تجربیات اساتید و دانشمندان در امر سوختگی خواهد بود در بهمن ماه ۱۴۰۱ برگزار می کنیم.
خرسندیم که باز شرایطی بوجود آمد تا بتوانیم در این گردهمآیی این علوم را به اشتراک بگذاریم این کنگره که با شعار اصلی دستاوردهای نوین دانش بنیان در سوختگی پا به میدان نهاده، قصد دارد تا شاید این حلقه سست بین دانش علوم پایه پزشکی و علوم بالینی را قدری تقویت کند.
علیرغم اینکه محوریت مقالات و سخنرانی ها در این کنگره بر پایه زخمپوش های نوین، مهندسی بافت، جراحی های حاد و ترمیمی و اسکار می باشد، سعی خواهد شد تا بتوانیم سایر معضلات حال حاضر امر پیشگیری و درمان سوختگی را در کنار این محوریت ها به بحث و چالش بکشیم.
خوشحالم که می توانیم پرچم کنگره سوختگی را که ما وارث آن هستیم و حاصل زحمات اساتید بنام ما بوده است را همچنان در بلندترین پایه ها به اهتزاز درآوریم و در این مهم مرکز تحقیقات سوختگی دانشگاه علوم پزشکی ایران همواره نقش بسزایی ایفا کرده است.
حضور شما سروران و عزیزان باعث مزید امتنان خواهد بود.

دکتر سیامک فرخ فرقانی
دبیرعلمی کنگره

پیام دبیر اجرایی کنگره

سوختگی جزو گروه حوادث اجتناب ناپذیر و تا حد زیادی غیرقابل پیش بینی می باشد، تا آنجا که حتی در کشورهای پیشرفته تر هم شاهد آمار بالایی از این گروه حوادث هستیم. صدمات ناشی از سوختگی متاسفانه بیشتر، افراد در محدوده سنی ۲۰ تا ۴۰ سال را درگیر مینماید؛ که بدیهی است جامعه جوان تر و افراد فعال تر اجتماع میباشند و در نتیجه تبعات سنگین مادی و روحی عظیمی در پی دارد.
شایان ذکر است میزان سوختگی الکتریکی در جهان یک تا ۵ درصد است لیکن در ایران این مورد شایع تر می باشد.
آمارها نشان می دهند که مسئله سوختگی باید بسیار جدی تر گرفته شود و رویکرد ما با سوختگی به‌عنوان یک رشته تخصصی و فوق تخصصی در جراحی، باید در جهت توسعه, تکامل و بروز رسانی بیشتر آن باشد.
در بسیاری از موارد علاوه بر صدمات جسمی و مادی, سوختگی منجر به مختل شدن زندگی افراد، انزوای اجتماعی، افسردگی و اسیب های شدید روحی می شود.
لذا با توجه به اهمیت بالای این موضوع پژوهشگران، جراحان و اساتید فرهیخته این رشته همواره می کوشند تا از طرق گوناگون از جمله برگزاری کنگرههای سالانه، به بحث و تبادل نظر پرداخته و معلومات و تجربیات خود را در اختیار یکدیگر قرار دهند.
اکنون که در یازدهمین کنگره کشوری سوختگی گرد هم خواهیم آمد؛ امیدواریم بتوانیم در انجام رسالت خود گامی مفیدتر برداشته و با بهره مندی از حضور کلیه همکاران ارجمند شرکت کننده و نیز استفاده از تجربیات و مطالب علمی به روز پژوهشگران و صاحبنظران این رشته، موجبات ارتقاء علمی بیشتر و نیز خدمت رسانی بهتر به بیماران دردمند سوختگی را بیش از پیش فراهم آوریم.

دکتر حمیدرضا علیزاده
دبیر اجرایی کنگره

پیام دبیر اجرایی کنگره

به فضل الهی امسال شاهد برگزاری یازدهمین کنگره کشوری سوختگی که شامل جدید ترین تحقیقات در مرز دانش و پیشرفت های دانش بنیان است، خواهیم بود. شعار کنگره امسال دستاورد های نوین دانش بنیان در سوختگی است که در چهار محور زخم پوش های نوین، مهندسی بافت، اسکار و جراحی های حاد و ترمیمی ارائه می گردد. امید است با همراهی تخصص های مختلف از رشته های بالینی، مهندسی و علوم پایه در کنگره امسال گامی موثر در رفع نیاز های بیماران سوختگی برداشته شود. تمام تلاش خود را در کنگره امسال خواهیم کرد تا ارتباط موثری بین شرکت های دانش بنیان فعال در این حیطه با مراکز دانشگاهی از طریق ارائه دستاورد ها و نیاز ها برقرار شود. از کلیه علاقه مندان، محققان و شرکت های فعال در موضوع سوختگی برای مشارکت و حضور فعال در کنگره امسال دعوت بعمل می آورد.

دکتر محمد پزشکی مدرس
دبیر اجرایی کنگره

کمیته علمی (به ترتیب حروف الفبا)

دکتر علی احمدآبادی	فرشته پور عباسعلی عمران
دکتر کامران اسعدی	زهرا پورمحمدی بجارپسی
دکتر محمد مهدی اصلانی	سپیده پیشوا
یوسف اعظمی	دکتر کرامت الله ترابی
دکترملاحت اکبر فهیمی	دکتر احسان تقی آبادی
دکتر حسین اکبری	دکتر نادر توکلی
دکتر ابوالحسن امامی	دکتر بهنام ثبوتی
دکتر آزاده امامی	دکتر عبدالرضا جعفری راد
دکتر هادی امراللهی	دکتر علی اکبرجعفریان
سحر امینی	دکتر علی اکبرجنگجو
زینب السادات اندی	مرجان حاجتی
دکتر مهدی ایاز	دکتر فرهاد حافظی
دکتر رعنا ایریلوزادیان	دکتر محمدحسین حسامی
دکتر مهرنوش اینانلو	دکتر مجیدخادم رضائیان
دکتر محمد رضا آخوندی نسب	شیرین داغ بلندان عراقی
دکتر بهرام آقایی	دکتر حامد دائمی
دکتر امیر باجوری	دکتر مصطفی ده مرده ئی
توران باقری	دکتر زهرا رام پیشه
دکتر نسرین لطفی بخشایش	دکتر معصومه روحانی نسب
دکتر نصرت الله بدوحی	محمدرضا زارعی
مهری بزرگ نژاد	دکتر مژگان زندی
دکتر محمدعلی بهار	دکتر امیر سرایی
دکتر الهام بهرنگی	دکتر سید مهدی سعید
الهام پارسا	مهناز سیدالشهدایی
دکتر محمد پزشکی مدرس	دکتر بهمن شریف زاده
پریسا پهلوانپور	دکتر نسرین شعربافچی زاده

کمیته علمی (به ترتیب حروف الفبا)

دکتر یوسف شفایی	محمد مهدی فیض آبادی
دکتر محسن شهروسوند	دکتر طیب قدیمی
دکتر افسانه صادق زاده بازرگان	هومن قربانی
زهرا صالحی	الهام الماسی قلعه
دکتر سید حمید صالحی	دکتر مظاهر قلی پور
دکتر رضا صالحی	دکتر جعفر کاظم زاده
دکتر مهدی صبوری	دکتر عباس کاظمی
دکتر فرهنگ صفرنژاد	دکتر عبدالخالق کشاورزی
دکتر علی صمدی	دکتر آزاده گودرزی
رقیه صمیمی	دکتر مژگان لطفی
رقیه صمیمی	دکتر نسرین لطفی بخشایش
دکتر حسن طاووسی	دکتر نوراحمد لطیفی
دکتر فریدون عابدینی	دکتر محمدرضا مبین
دکتر نجم السادات عاطفی	فاطمه محدث اردبیلی
دکتر ابوالفضل عباس زاده	دکتر علی اکبر محمدی
دکتر حمیدرضا علیزاده	دکتر ماندانا مکی
دکتر محمود عمرانی فرد	دکتر ناهید میرزایی
دکتر محمد جواد فاطمی	دکتر سهیلا نادری قره قشلاق
دکتر ناصر فتورایی	پرویز نمازی
دکتر سیامک فرخ فرقانی	دکتر رامین هومند
دکتر صدیقه فرضی	دکتر سودابه هویدامنش
دکتر شیرین فهیمی	دکتر رضا وقردوست

داوران (به ترتیب حروف الفبا)

دکتر علی احمدآبادی	دکتر رضا صالحی
دکتر کامران اسعدی	دکتر مهدی صبوری
دکتر محمد رضا آخوندی نسب	دکتر علیرضا صداقت
یوسف اعظمی	دکتر علی صمدی
دکتر حسین اکبری	رقیه صمیمی
دکتر مهدی ایاز	دکتر حسن طاووسی
دکتر رعنا ایریلوزادیان	دکتر ابوالفضل عباس زاده
دکتر مهرنوش اینانلو	دکتر حمیدرضا علیزاده
دکتر امیر باجوری	دکتر محمد جواد فاطمی
توران باقری	دکتر سیامک فرخ فرقانی
مهری بزرگ نژاد	دکتر شیرین فهیمی
دکتر الهام بهرنگی	دکتر محمد مهدی فیض آبادی
دکتر الهام پارسا	دکتر طیب قدیمی
دکتر محمد پزشکی مدرس	هومن قربانی
دکتر بهنام ثبوتی	دکتر جعفر کاظم زاده
دکتر علی اکبر جعفریان	دکتر محمدرضا مبین
دکتر مجید خادم رضائیان	فاطمه محدث
دکتر مصطفی ده مرده ئی	دکتر علی اکبر محمدی
دکتر زهرا رام پیشه	دکتر ماندانا مکی
محمدرضا زارعی	دکتر پروین منصوری
دکتر مژگان زندی	دکتر ناهید میرزایی
دکتر سید مهدی سعید	دکتر سهیلا نادری
مهناز سیدالشهدایی	پرویز نمازی
دکتر سعید شفیعیان	دکتر رضا وقردوست
دکتر سید حمید صالحی	دکتر سودابه هویدامنش

کمیته اجرایی (اسامی به ترتیب حروف الفبا)

سحر امینی	دکتر حمیدرضا علیزاده
توران باقری	دکتر سیامک فرخ فرقانی
شیرین داغ بلندان عراقی	دکتر طیب قدیمی
پرویز نمازی	سولماز قرشی
دکتر رعنا ایریلوزادیان	دکتر نوراحمد لطیفی
دکتر محمد پزشکی مدرس	دکتر سودابه هویدامنش
دکتر مصطفی دهمرده‌ئی	

دبیرخانه علمی: تهران، خیابان ولی عصر، خیابان رشید یاسمی، مرکز آموزشی- درمانی شهید مطهری، مرکز تحقیقات سوختگی
تلفکس: ۸۸۸۸۴۲۷۵ -۰۲۱

دبیرخانه اجرایی: تهران، بزرگراه جلال آل احمد، بعد از پل گیشا، روبروی خیابان شهرآرا، کوچه چهارم، پلاک۹، واحد۶، طبقه سوم، مرکز همایش های مهناد
تلفن: (۱۰ خط) ۸۸۲۴۹۷۷۵
www.mahnadco.ir

برگزارکنندگان

دانشگاه علوم پزشکی و خدمات بهداشتی درمانی ایران

مرکز تحقیقات سوختگی دانشگاه علوم پزشکی ایران

همکاران

مرکز آموزشی و درمانی شهید مطهری

مرکز آموزشی و درمانی حضرت فاطمه (س)

انجمن قفقوس (جمعیت حمایت از بیماران سوختگی)

انجمن جراحان پلاستیک و زیبایی ایران

پژوهشگاه پلیمر و پتروشیمی ایران

پژوهشگاه رویان

MAHNAD

اسپانسر

مدار سلامت

شرکت دانش بنیان

BIOPTRON

HYPERLIGHT THERAPY SYSTEM

arta pharmed

برنامه علمی

یازدهمین کنگره کشوری سوختگـــی

تهران، مرکز همایش های بین المللی رازی / ۲۷-۲۸ بهمن ماه ۱۴۰۱

روز اول پنجشنبه ۲۷ بهمن ماه ۱۴۰۱ - سالن (۱)

ساعت	عنوان سخنرانی	نام و نام خانوادگی سخنران
۸:۰۰-۸:۱۰	**تلاوت قران مجید و سرود ملی**	
۸:۱۰-۸:۲۰	**سخنرانی رئیس کنگره**	دکتر سید حمید صالحی
۸:۲۰-۸:۳۰	**سخنرانی دبیر علمی**	دکتر سیامک فرخ فرقانی
۸:۳۰-۸:۴۰	**سخنرانی رئیس مرکز تحقیقات سوختگی دانشگاه علوم پزشکی ایران**	دکتر طیب قدیمی
۸:۴۰-۸:۵۰	**معاونت محترم درمان وزارت بهداشت درمان و آموزش پزشکی**	دکتر سعید کریمی
هیات رئیسه اول : دکتر نوراحمد لطیفی-دکتر ابوالحسن امامی-دکتر نصرت الله بدوحی		
۸:۵۰-۹:۰۵	Standards of beauty in facial burn reconstruction	دکتر کامران اسعدی
۹:۰۵-۹:۱۵	Cervico-mental angle correction in burn scar contracture with chin augmentation	دکتر محمدحسین حسامی رستمی
۹:۱۵-۹:۳۰	New local anti-microbial agents for management of acute burn wounds	دکتر علی احمدآبادی
۹:۳۰-۱۱:۰۰	**پانل: مدیریت سوختگی وسیع بر اساس کار تیمی** **گرداننده: دکتر عبدالخالق کشاورزی** **سخنران:** دکتر سید حمید صالحی - دکتر نادر توکلی-دکتر محمد مهدی اصلانی-دکتر رضا صالحی-دکتر محمدرضا مبین-دکتر مهدی ایاز-دکتر سید حسن طاووسی-پرویز نمازی	
۱۱:۰۰-۱۱:۳۰	**استراحت و پذیرایی و بازدید از پوسترها و نمایشگاه**	
۱۱:۳۰-۱۳:۰۰	**پانل: استفاده از فناوری های نوین در ترمیم زخم های سوختگی: زخم پوش‌ها، جایگزین‌های درم و سلول درمانی** **گرداننده: دکتر امیر باجوری** **سخنران:** دکتر طیب قدیمی - دکتر مژگان زندی-دکتر محمد پزشکی مدرس-دکتر مظاهر قلی پور-دکتر احسان تقی آبادی- دکتر حامد دائمی- دکتر سید مهدی سعید	
۱۳:۰۰-۱۴:۰۰	**ناهارو نماز**	
۱۴:۰۰-۱۵:۰۰	**پانل: Burn scar management: Laser, cell and cell product, PRP and combination therapy** **گرداننده:دکتر الهام بهرنگی** **-سخنران:** دکتر نجم السادات عاطفی- دکتر آزاده گودرزی- دکتر معصومه روحانی نسب دکتر افسانه صادق زاده بازرگان-دکتر مهدی صبوری	

روز اول پنجشنبه ۲۷ بهمن ماه ۱۴۰۱ - سالن (۱)

هیات رئیسه دوم: دکتر حسین اکبری- دکتر محمدعلی بهار- دکتر مصطفی دهمرده‌ئی- دکتر حمیدرضا علیزاده- دکتر آزاده امامی

دکتر علی اکبر محمدی	Aloe vera hydrogel loaded by adipose-derived stem cells promote burn wound healing	۱۵:۰۰-۱۵:۱۰
دکتر نوراحمد لطیفی	Clinical trial of autologous epidermal cell transplantation in hypopigmented burn scar spot treatment	۱۵:۱۰-۱۵:۲۰
دکتر محمد عظیمی الموتی	Fabrication of cell-laden collagen hydrogel bilayer composite loaded with amniotic membrane extract for full-thickness wound repair	۱۵:۲۰-۱۵:۳۰
دکتر عبدالرضا جعفری راد	Plasmapheresis in burn	۱۵:۳۰-۱۵:۴۵
دکتر محمدرضا مبین	Wharton's Jelly derived mesenchymal stem cells transfected by HIF-1α promote wound healing in rat model of excision injury	۱۵:۴۵-۱۵:۵۵
دکتر نسرین لطفی بخشایش	Bio-printers in skin tissue engineering	۱۵:۵۵-۱۶:۱۰
دکتر علیرضا رفعتی	In vivo evaluation of electrospun nanofibrous scaffold containing bentonite nanoparticle on wound healing	۱۶:۱۰-۱۶:۲۰
دکتر آرین رنجبر دستجرد	معرفی دستگاه پرتابل پوشش ساز نانوالیاف کوآکسیال جهت تولید زخم پوش های سوختگی و محل دونور	۱۶:۲۰-۱۶:۳۰
دکتر فرهنگ صفرنژاد	بررسی قطر قدامی خلفی ورید اجوف تحتانی به عنوان معیار کفایت مایع درمانی در بیماران	۱۶:۳۰-۱۶:۴۰
دکتر علیرضا فیض خواه	Intraoperative 3D Bio-printing: A transformative technology for burn surgery	۱۶:۴۰-۱۶:۵۰
دکتر امین قانعی انارکی	Evaluation of early use of silver-based wound dressing (Ag-coat) in combination with delayed excision compared to early excision in patients with deep extremities burns	۱۶:۵۰-۱۷:۰۰

روز دوم جمعه ۲۸ بهمن ماه ۱۴۰۱ - سالن (۱)

ساعت	عنوان سخنرانی ، کارگاه ، میزگرد و...	نام و نام خانوادگی سخنران
۸:۰۰-۸:۱۰	تلاوت قران	
هیات رئیسه اول: دکتر محمدرضا آخوندی نسب – دکتر محمدحسین حسامی - دکتر رضا وقردوست- دکتر عبدالرضا جعفری راد ر		
۸:۱۰-۸:۲۰	Early marjolin's ulcer after hand burn	دکتر علی اکبر محمدی
۸:۲۰-۸:۳۰	Morphometric and histopathological evaluation of the effects of umbilical cord blood-mesenchymal stem cells (UCB-MSCs) on second-degree burn wounds	دکتر میلاد قاسمی
۸:۳۰-۸:۴۵	Personal experiences on long term facial burn reconstruction	دکتر فرهاد حافظی
۸:۴۵-۹:۰۰	Fungal infections in burn unit centers	دکتر هادی امراللهی
۹:۰۰-۱۰:۳۰	**پانل: بررسی گایدلاین و کوریکولوم سوختگی/ساختار و چالش‌های درمان و مدیریت آن** **گرداننده: دکتر محمود عمرانی فرد** **سخنران:** دکتر نسرین شعربافچی زاده - دکتر طیب قدیمی- دکتر علی اکبر محمدی- دکتر علی اکبر جنگجو- دکتر بهرام آقایی- دکتر فرهاد حافظی- دکتر سیدحسن طاووسی- دکتر مصطفی دهمرده‌ئی- دکتر صدیقه فرضی	
۱۰:۳۰-۱۱:۰۰	استراحت و پذیرایی و بازدید از نمایشگاه و پوسترها	
۱۱:۰۰-۱۳:۰۰	کارگاه لایت تراپی / سالن ۴ طبقه اول	دکتر مصطفی دهمرده‌ئی
هیات رئیسه دوم: دکتر عباس کاظمی - دکتر علی اکبر محمدی-دکتر یوسف شفاهی- دکتر ابوالفضل عباس زاده- دکتر مهدی ایاز		
۱۱:۰۰-۱۱:۱۰	Fabrication and characterization of Sargassum Glaucescens Extract (SGE) embedded in marine-derived collagen for burn wound healing	دکتر سهیلا نادری قره قشلاق
۱۱:۱۰-۱۱:۲۰	Multilocus sequence typing and molecular characterization of multidrug-resistant (MDR) Pseudomonas aeruginosa isolated from burn patients	دکتر امیر امامی
۱۱:۲۰-۱۱:۳۵	ضرورت ارزیابی مبتنی بر استدلال بالینی در مباحث سوختگی	دکتر مجید خادم رضائیان
۱۱:۳۵-۱۱:۵۰	Early triamcinolone injection and laser therapy in keloids and hypertrophic scars	دکتر عبدالخالق کشاورزی

روز دوم جمعه ۲۸ بهمن ماه ۱۴۰۱ - سالن (۱)

۱۱:۵۰-۱۲:۰۰	Comparing the results and complications of early excision and grafting method with late excision and grafting method in Imam Reza Hospital patients during 2019 and 2020	دکتر سید حسن طاووسی
۱۲:۰۰-۱۲:۱۰	Polyacrylic acid/polyvinylpyrrolidone hydrogel wound dressing containing zinc oxide nanoparticles promoted wound healing in a rat model of excision injury	دکتر محمدرضا مبین
۱۲:۱۰-۱۲:۲۰	Development of antibacterial acellular dermal matrix scaffold as a potential skin substitute	دکتر سیده سارا هاشمی
۱۲:۲۰-۱۲:۳۰	Porcine xenografts in treatment of burn patients	دکتر رعنا ایریلوزادیان
۱۲:۳۰-۱۲:۴۰	Post-burn leukoderma: Our early experience with Miniature punch grafting	دکتر علی احمدآبادی
۱۲:۴۰-۱۲:۵۰	The relationship between the serum albumin level with burn severity and burn surface before and after primary skin grafting surgery in patients admitted to Imam Khomeini Hospital in Urmia	دکتر جعفر کاظم زاده
۱۲:۵۰-۱۳:۰۰	Outcomes of conservative management of deep second-degree burn wounds of the trunk	دکتر عبدالخالق کشاورزی
۱۳:۰۰-۱۴:۰۰	**ناهار و نماز**	
۱۴:۰۰-۱۵:۳۰	**پانل: محصولات دانش بنیان در سوختگی** **گرداننده: دکتر محمدرضا مبین** **سخنران:** دکتر محسن شهروسوند - دکتر ناصر فتورایی- دکتر بهمن شریف زاده- دکتر علی احمدآبادی - دکتر بهنام ثبوتی- دکتر فرهنگ صفرنژاد- زهرا پورمحمدی بجارپسی	
	هیات رئیسه سوم: دکتر رامین هومند- دکتر فریدون عابدینی- دکتر کرامت الله ترابی- دکتر محمد پزشکی مدرس	
۱۵:۳۰- ۱۵:۴۰	Hyaluronic acid hydrogel as an effective carrier for adipose-derived stem cells in burn wound healing	دکتر علی اکبر محمدی
۱۵:۴۰-۱۵:۵۰	Management of burn injuries of nipple-areolar complex and breast tissue in prepubescent girls: Case series and review of articles	دکتر علی احمدآبادی
۱۵:۵۰-۱۶:۰۰	Electrospun Polycaprolactone/Chitosan/Jaft biocompatible nanofibers for skin tissue engineering	دکتر علیرضا رفعتی
۱۶:۰۰-۱۷:۰۰	**اختتامیه**	

روز دوم جمعه ۲۸ بهمن ماه ۱۴۰۱ - سالن (۲)

ساعت	عنوان سخنرانی	نام و نام خانوادگی سخنران
۸:۰۰-۸:۱۰	**تلاوت قران مجید و سرود ملی**	
۸:۱۰-۸:۲۰	**سخنرانی رئیس مرکز تحقیقات سوختگی**	دکتر طیب قدیمی
هیات رئیسه اول: - پرویز نمازی-دکتر سودابه هویدامنش-سحر امینی-زینب السادات اندی		
۸:۲۰-۸:۳۰	Evaluating the effectiveness of Utah University's fluid resuscitation protocol on the quality of fluid therapy in adult burn patients	دکتر علی احمدآبادی
۸:۳۰-۸:۴۰	Herbal medicine in the treatment of burn patients	دکتر سیامک فرخ فرقانی
۸:۴۰-۸:۵۰	Challenges' home care of patients with burn: A qualitative study	دکتر صدیقه فرضی
۸:۵۰-۹:۱۰	تاثیر پرستاری توانبخشی بر سلامت جامع افراد با سوختگی دست: ارائه یک الگو	مهناز سیدالشهدایی
۹:۱۰-۹:۲۰	A Brief report on the effect of COVID19- pandemic on patients undergoing skin graft surgery in a burn hospital from March 2019 to March 2022	دکتر حمیدرضا علیزاده
۹:۲۰-۹:۳۰	Probiotics as an alternative solution to antibiotics for the treatment of burn wound infection with multi-drug resistant bacteria in a mouse model	دکتر معصومه حلاج زاده
۹:۳۰-۱۰:۳۰	**پانل: مراقبت در منزل** **گرداننده: مهناز سیدالشهدایی** **سخنران:** دکتر سیدحمید صالحی - الهام الماسی قلعه- پرویز نمازی- مرجان حاجتی - زهرا صالحی	
۱۰:۳۰-۱۱:۰۰	**استراحت و پذیرایی و بازدید از نمایشگاه و پوسترها**	
هیات رئیسه دوم : فاطمه محدث اردبیلی- توران باقری- شیرین داغ بلندان عراقی- پریسا پهلوانپور		
۱۱:۰۰-۱۱:۱۰	Effects of probiotic administration in Inflammatory Responses of thermal burns	ساناز معصومی
۱۱:۱۰-۱۱:۲۰	Evaluation of amnion sheet dressing efficiency in comparison to silver-based dressings on the healing of burn wounds	دکتر امین قانعی انارکی
۱۱:۲۰-۱۱:۳۰	Prevalence and risk factors for delirium in burn patients admitted to burn care unit in north of Iran	سجاد راحت طلب
۱۱:۳۰-۱۱:۵۰	الگو تحلیل علم سنجی جایگاه ایران در حوزه سوختگی در جهان	دکتر مجید خادم رضائیان

روز دوم جمعه ۲۸ بهمن ماه ۱۴۰۱ - سالن (۲)

۱۱:۵۰-۱۲:۰۰	Comparison of the effects of biological (amniotic) with traditional dressings in the treatment of deep second degree burn wounds 5-20%	مرجان حاجتی
۱۲:۰۰-۱۲:۱۰	Investigating factors related to serum albumin level and its consequences in burn patients	محمد طلوعی
۱۲:۱۰-۱۲:۲۰	The effect of multimodal exercise and egg white diet on inflammatory markers interleukin 6 and CRP, body composition and muscle strength in burn patients after discharge	پریچهر سلیمانی
۱۲:۲۰-۱۲:۵۰	سوختگی و تدابیر آن در طب سنتی ایرانی	دکتر الهام پارسا
۱۲:۵۰-۱۳:۰۰	Smart dressing to monitor the temperature and humidity and pH the wound with the ability to send SMS content information of wound to the treatment team and implement telemedicine	گلناز ظفری پور
۱۳:۰۰-۱۴:۰۰	**ناهار و نماز**	
۱۴:۰۰-۱۵:۰۰	**پانل: نقش خانواده در پذیرش بیمار سوخته** **گرداننده: دکتر مهرنوش اینانلو** **سخنران:** دکترملاحت اکبر فهیمی - هومن قربانی- سپیده پیشوا-عضو خانواده رهیده از سوختگی	
هیات رئیسه سوم: دکتر رعنا ایریلوزادیان- دکتر مژگان لطفی- فرشته پور عباسعلی عمران- رقیه صمیمی		
۱۵:۰۰-۱۵:۱۰	Suicidal continuum (ideation, planning, attempting) in patients with self-immolation	دکتر مجید خادم رضائیان
۱۵:۱۰-۱۵:۲۰	Combination therapy of inverse agonist of vitamin D receptor (VDR) nanogel and Lipocalin-2 engineered mesenchymal stem cells improve wound healing in rat model of excision injury	زهرا پورمحمدی بیجارپاسی
۱۵:۲۰-۱۵:۳۰	ESR, CRP, and WBC serum levels in burn patients and their relationship with the prognosis of burn patients referred to Imam Khomeini Hospital, Ilam, Iran	آرین کریمی روزبهانی
۱۵:۳۰-۱۵:۴۰	Detection of extended spectrum β-lactamases and metallo β-lactamases in pseudomonas aeruginosa isolated from burns patients	ندا پیربنیه
۱۵:۴۰-۱۵:۵۰	The metallo-β-lactamase producing Pseudomonas aeruginosa characteristics in burn wounds: Phenotypic and genotypic evaluation	مسلم کرم پور
۱۵:۵۰-۱۶:۰۰	Role of NPWT as a promising treatment in older adult patient with burn: a systematic review	حامد سوادکوهی
۱۶:۰۰-۱۷:۰۰	**اختتامیه**	

برنامه پانل ها

یازدهمین کنگره کشوری سوختگی

تهران، مرکز همایش های بین المللی رازی / ۲۷-۲۸ بهمن ماه ۱۴۰۱

روز اول (سالن ۱)- پنجشنبه ۱۴۰۱/۱۱/۲۷

عنوان	مدیریت سوختگی وسیع بر اساس کار تیمی
گرداننده	دکتر عبدالخالق کشاورزی
عنوان سخنرانی	اداره سوختگی ۷۰ ٪ درجه ۲ و ۳ در دو بیمار حاد و تاخیری

زمان	اعضاء	درجه علمی و تخصص
۹:۳۰-۱۱:۰۰	دکتر سید حمید صالحی	استاد جراحی سوختگی دانشگاه علوم پزشکی ایران
	دکتر عبدالخالق کشاورزی	استادیار جراحی سوختگی دانشگاه علوم پزشکی شیراز
	دکتر نادر توکلی	استاد-متخصص طب اورژانس
	دکتر محمد مهدی اصلانی	متخصص بیهوشی- شیراز
	دکتر رضا صالحی	استادیار-متخصص بیهوشی دانشگاه علوم پزشکی ایران
	دکتر محمدرضا مبین	دانشیار جراحی سوختگی- مرکز تحقیقات سوختگی و پزشکی بازساختی دانشگاه علوم پزشکی گیلان
	دکتر مهدی ایاز	دانشیار جراحی سوختگی دانشگاه علوم پزشکی شیراز
	دکتر سید حسن طاووسی	دانشیار جراحی سوختگی دانشگاه علوم پزشکی مشهد
	پرویز نمازی	کارشناس ارشد پرستاری مراقبت‌های ویژه-مدیر پرستاری مرکز آموزشی درمانی شهید مطهری تهران

روز اول (سالن ۱) - پنجشنبه ۱۴۰۱/۱۱/۲۷

عنوان	استفاده از فناوری های نوین در ترمیم زخم های سوختگی: زخم پوش‌ها، جایگزین‌های درم و سلول درمانی
گرداننده	دکتر امیر باجوری

زمان	عناوین سخنرانی	اعضای سخنران	اعضای پانل	تخصص
۱۱:۳۰-۱۲:۰۰			دکتر طیب قدیمی	دانشیار جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی ایران
			دکتر مژگان زندی	سنتز زیست پلیمرها عضو هیات علمی پژوهشگاه پلیمر و پتروشیمی ایران
	محصولات سلولی تجاری در درمان سوختگی	دکتر امیر باجوری	دکتر امیر باجوری	پزشک، PHD علوم سلولی کاربردی مرکز تحقیقات پوست و سلول های بنیادی دانشگاه علوم پزشکی تهران
	ساختار های سه بعدی نانولیفی و هیدروژلی در ترمیم و باز سازی لایه درم	دکتر محمد پزشکی مدرس	دکتر محمد پزشکی مدرس	زیست پلیمر-مهندسی بافت عضو هیات علمی مرکز تحقیقات سوختگی دانشگاه علوم پزشکی ایران
	زخم پوش های بر پایه غشا آمنیون	دکتر مظاهر قلی پور	دکتر مظاهر قلی پور	مهندسی بافت عضو هیات علمی دانشگاه علوم پزشکی ایران
	کاربرد سلول درمانی در درمان سوختگی	دکتر احسان تقی آبادی	دکتر احسان تقی آبادی	PHD علوم سلولی کاربردی مرکز تحقیقات پوست و سلول های بنیادی دانشگاه علوم پزشکی تهران
	ترمیم زخم های تمام ضخامت با استفاده پانسمان های پیشرفته پلیمری	دکتر حامد دائمی	دکتر حامد دائمی	زیست پلیمر-سنتز عضو هیات علمی پژوهشگاه رویان
			دکتر سید مهدی سعید	زیست پلیمر، نانوالیاف عضو هیات علمی پژوهشکده مهندسی بافت دانشگاه آزاد اسلامی

روز اول (سالن ۱) - پنجشنبه ۱۴۰۱/۱۱/۲۷

عنوان	Burn scar management: Laser, cell and cell product, PRP and combination therapy
گرداننده	دکتر الهام بهرنگی

زمان	عناوین سخنرانی	اعضاء	درجه علمی و تخصص
۱۴:۰۰-۱۵:۰۰	فراورده های سلولی و PRP در درمان اسکار سوختگی	دکتر الهام بهرنگی	متخصص پوست- دانشیار دانشگاه علوم پزشکی ایران
	لیزر co۲ در درمان اسکار سوختگی	دکتر نجم السادات عاطفی	متخصص پوست- دانشیار دانشگاه علوم پزشکی ایران
	درمان ترکیبی با لیزر co۲ و PDL در اسکار سوختگی: مطالعه کارازمایی بالینی در مرکز لیزر بیمارستان حضرت فاطمه	دکتر آزاده گودرزی	متخصص پوست- دانشیار دانشگاه علوم پزشکی ایران
	SVF در درمان اسکار سوختگی	دکتر معصومه روحانی نسب	متخصص پوست- استادیار دانشگاه علوم پزشکی ایران
	درمان‌های دارویی و پیشگیری از اسکارهای غیر طبیعی	دکتر افسانه صادق زاده بازرگان	متخصص پوست- استادیار دانشگاه علوم پزشکی ایران
	نقش لیزر داپلر در تعیین عمق سوختگی	دکتر مهدی صبوری	استادیار جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی ایران

روز دوم (سالن ۱)- جمعه ۱۴۰۱/۱۱/۲۸

عنوان	بررسی گایدلاین و کوریکولوم سوختگی/ساختار و چالش‌های درمان و مدیریت آن
گرداننده	دکتر محمود عمرانی فرد (استاد جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی اصفهان)

زمان	عناوین سخنرانی	اعضاء	درجه علمی و تخصص
۱۰:۳۰-۹:۰۰	ساختار ارائه خدمات درمان سوختگی	دکتر نسرین شعربافچی زاده	دانشیار مدیریت خدمات بهداشتی درمانی دانشگاه علوم پزشکی اصفهان
	چالش های درمان و بازتوانی بیماران سوختگی مزمن	دکتر طیب قدیمی	دانشیار جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی ایران
	تدوین و تعهد به اجرای گایدلاین های بالینی سوختگی	دکتر علی اکبر محمدی	استاد جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی شیراز
	مراقبت پیش بیمارستانی و سطح بندی ارائه خدمات به بیماران سوختگی	دکتر علی اکبر جنگجو	متخصص طب اورژانس-رئیس مرکز آموزشی درمانی امام موسی کاظم (ع) اصفهان
	تامین مالی و سرانه سوختگی در کشور	دکتر بهرام آقایی	دکتری تخصصی مدیریت مالی کارشناس امور مالی وزارت بهداشت، درمان و آموزش پزشکی
	کوریکولوم آموزشی دانشجویان پزشکی و پیراپزشکی	دکتر فرهاد حافظی	استاد جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی ایران
	چالش های درمان سوختگی حاد	دکتر سیدحسن طاووسی	دانشیار جراحی سوختگی دانشگاه علوم پزشکی مشهد
	مدیریت آینده در بیماری سوختگی	دکتر مصطفی دهمرده‌ئی	دانشیار جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی ایران
	چالش های مراقبت پرستاری در سوختگی	دکتر صدیقه فرضی	استادیار پرستاری دانشگاه علوم پزشکی اصفهان

روز دوم (سالن ۱)- جمعه ۱۴۰۱/۱۱/۲۸

عنوان	محصولات دانش بنیان در سوختگی
گرداننده	دکتر محمدرضا مبین

زمان	عناوین سخنرانی	اعضاء	درجه علمی و تخصص
۱۴:۰۰-۱۵:۳۰	نقش پلیمرها و بیومتریال در پزشکی بازساختی	دکتر محسن شهروسوند	دکترای مهندسی پلیمر استادیار دانشکده فنی کاسپین چوکا، پردیس فنی دانشگاه تهران
	فناوری های نوین مهندسی پزشکی در سوختگی	دکتر ناصر فتورایی	دکترای مهندسی پزشکی- دانشیار گروه مهندسی پزشکی (بیومکانیک) دانشگاه امیرکبیر تهران
	آشنایی با زمینه سوختگی و چالش های پیش رو با چشم انداز دانش بنیان	دکتر محمدرضا مبین	دانشیار جراحی سوختگی- مرکز تحقیقات سوختگی و پزشکی بازساختی دانشگاه علوم پزشکی گیلان
	قوانین و مقررات حاکم بر دانش بنیانی شدن محصولات نوین سوختگی	دکتر بهمن شریف زاده	دکترای شیمی آلی- عضو هیئت علمی گروه علوم مهندسی، دانشکده فنی مهندسی شرق گیلان، دانشگاه گیلان
	مراقبتهای نوین در سوختگی های مزمن	دکتر علی احمدآبادی	دانشیار جراحی سوختگی- مرکز تحقیقات جراحی سرطان دانشگاه علوم پزشکی مشهد
	مراقبتهای نوین در سوختگی های حاد اطفال	دکتر بهنام ثبوتی	فوق تخصص عفونی کودکان-استاد دانشگاه علوم پزشکی ایران
	سیر تکاملی زخم پوش ها در درمان سوختگی	دکتر فرهنگ صفرنژاد	استادیار جراحی پلاستیک، ترمیمی و سوختگی دانشگاه علوم پزشکی کردستان
	سلول درمانی و پزشکی بازساختی زخم های سوختگی	زهرا پورمحمدی بجارپسی	کارشناس ارشد بیوتکنولوژی پزشکی- مرکز تحقیقات سوختگی و پزشکی بازساختی، دانشگاه علوم پزشکی گیلان

روز دوم (سالن ۲)- جمعه ۱۴۰۱/۱۱/۲۸

عنوان	مراقبت در منزل
گرداننده	مهناز سیدالشهدایی

زمان	عناوین سخنرانی	اعضاء	درجه علمی و تخصص
۹:۳۰-۱۰:۳۰	شرایط ارجاع بیمار جهت مراقبت در منزل	دکتر سیدحمید صالحی	استاد جراحی سوختگی دانشگاه علوم پزشکی ایران
	لزوم استفاده از بسته‌های حمایتی	الهام الماسی قلعه	کارشناس ارشد آموزش پزشکی- رئیس گروه سلامت جامعه معاونت پرستاری
	معرفی بسته حمایتی مراقبت جامع در منزل ابلاغی از وزارت	مهناز سیدالشهدایی	کارشناس ارشد آموزش پرستاری- عضو هیات علمی دانشکده پرستاری و مامایی دانشگاه علوم پزشکی ایران
	فرایند بهبود زخم /کاربرد پانسمان در منزل	پرویز نمازی	کارشناس ارشد پرستاری مراقبت‌های ویژه-مدیر پرستاری مرکز آموزشی درمانی شهید مطهری تهران
	آموزش خود مدیریتی مددجو و خانواده در منزل (تغذیه، حرکت درمانی و ...)	مرجان حاجتی	کارشناس پرستاری- مدیر پرستاری مرکز آموزشی درمانی و پژوهشی ولایت رشت
	کنترل عفونت و کاربرد داروها در منزل	زهرا صالحی	کارشناس پرستاری-سرپرستار بخش ترمیمی مرکز آموزشی درمانی امیرالمونین شیراز

روز دوم (سالن ۲)- جمعه ۱۴۰۱/۱۱/۲۸

عنوان	نقش خانواده در پذیرش بیمار سوخته
گرداننده	دکتر مهرنوش اینانلو

زمان	عناوین سخنرانی	اعضاء	درجه علمی و تخصص
۱۴:۰۰-۱۵:۰۰	خانواده محوری در درمان و توانبخشی	دکتر مهرنوش اینانلو	دکترای تخصصی مشاوره توانبخشی- استادیار دانشکده پرستاری دانشگاه علوم پزشکی ایران
	نقش خانواده در توانبخشی حرفه ای	دکترملاحت اکبر فهیمی	دکترای تخصصی علوم اعصاب شناختی- استادیار دانشکده علوم توانبخشی دانشگاه علوم پزشکی ایران
	نقش آموزش خانواده در بهبود کیفیت خدمت توانبخشی	هومن قربانی	کارشناس ارشد کاردرمانی-کاردرمانگر مرکز آموزشی درمانی شهید مطهری تهران
	تبعات روانی – اجتماعی سوختگی بر خانواده	سپیده پیشوا	کارشناس ارشد روانشناسی بالینی- روانشناس و مددکار انجمن حمایت از بیماران سوخته (ققنوس)
	تجربه " عضو خانواده بیمار سوختگی بودن "	عضو خانواده رهیده از سوختگی	

مقالات سخنرانی

یازدهمین کنگره کشوری سوختگی

تهران، مرکز همایش های بین المللی رازی / ۲۷-۲۸ بهمن ماه ۱۴۰۱

Evaluating the effectiveness of Utah University's fluid resuscitation protocol on the quality of fluid therapy in adult burn patients

Ali Ahmadabadi[1], Masoumeh Ahmadi Hoseini[2]

1.Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

2. Burns and Reconstructive Surgery Department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : Fluid therapy is an essential primary measure in the treatment of burn patients, which could reduce the rate of mortality. Since the optimal evaluation of fluid volume according to the resuscitation protocol plays an important role in the survival of burn patients, the aim of this study was to evaluate the effect of applying the Utah University protocol on fluid resuscitation quality in adult burn patients.

Methods : This is a double-blind clinical trial study. Overall, 94 burn patients were randomly divided into intervention and control groups (n=47 per group). At first, fluid requirements were calculated according to the Parkland formula for each patient. Then for the control group, half of the fluid was infused over the first eight hours and the remaining in the next 16 hours after hospitalization. In the intervention group, the infusion was performed according to the Utah University protocol for fluid resuscitation.

Results : The comparison of vital signs in the first 24 hours of fluid therapy showed that blood oxygen level (P=0.004), heart rate (P=0.005), respiratory rate (P=0.038), urine output (P=0.000), and the amount of fluid therapy (P=0.027) were significantly different in the two groups.

Conclusion : The use of Utah University protocol for fluid resuscitation in adult burn patients and determination of the rate of fluid therapy based on urine output can improve blood oxygen level, heart rate, respiration rate, and fluid intake. Thus, the use of this protocol by the burn care team can reduce the patient care burden.

Keywords : Burns, Fluid therapy, Utah University protocol, Adult resuscitation protocol, Parkland Formula

A Brief report on the effect of covid19 pandemic on patients undergoing skin graft surgery in a burns hospital from march 2019 to march 2022

Hamidreza Alizadeh[1], arian karimi rouzbahani[2], golnaz mahmoudvand[3]

1. Trauma and injury research center, iran university of medical sciences,Tehran,iran
2. Trauma and injury research center, iran university of medical sciences,Tehran,iran
3. Trauma and injury research center, iran university of medical sciences,Tehran,iran

Background and Aim : The covid 19 virus has affected the lives of all people on the planet.to deal with it, the virus behavior at all levels of work must be examined,as,in this article we have tried to discuss the behavior of this virus with skin graft surgery patients.

Methods : In this study, about 5000 patients from march 2019 to march 2020 referred to motahhari burns hospital were about 155 candidates for skingraft surgery.skin graft surgery involves removing a layer of a persons skin and placing it on the affected area.the doctor selects a matched tissue close to the affected area, removes the skin, and grafts it where it needs to be repaired.

Results : Out of 155 patients included in this study,101 were men and 54 were women.the patients age ranged from 13 to 75 years.all patients had positive PCR tests and CT scans confirming covid 19.the success rate of surgery was 0.445 in men and 0.388 in women.

Conclusion : The findings of this study showed that covid 19 increased the likelihood of skin graft rejection significantly.

Keywords : Covid19.plastic surgery.skin graft.skin transplantation.burn

Multilocus sequence typing and molecular characterization of multidrug-resistant (MDR) Pseudomonas aeruginosa isolated from burn patients

Amir Emami[1], Neda Pirbonyeh[2], Fatemeh javanmardi[3], Tayebeh Jakarani[4], Abdolkhalegh Keshavarzi[5]

1. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Department of Biostatistics, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran
4. Department of Microbiology, College of Sciences, Shiraz Branch, Islamic Azad University, Shiraz, Iran
5. Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran.

Background and Aim : Pseudomonas aeruginosa is an important nosocomial pathogen that exhibits multiple resistances to antibiotics with increasing frequency, making patient treatment more difficult. The aim of this study was to characterize molecularly multidrug-resistant (MDR) Pseudomonas aeruginosa isolates collected from burn patients in a hospital Amir al momenin in Shiraz, Iran.

Methods : A significant set (50) of randomly selected clinical P. aeruginosa isolates. The antimicrobial resistance was tested by the disk diffusion method as recommended by CLSI. These strains including multidrug and non-multidrug-resistant isolates were assigned to sequence types (STs) and compared with their antibiotic susceptibility profile classified as follows: extensively drug-resistant (XDR), multidrug-resistant (MDR) and non-multidrug resistant (non-MDR). The genetic diversity was assessed by applying the multilocus sequence typing (MLST) scheme developed by Curran and collaborators, and by the phylogenetic analysis of a concatenated tree.

Results : The analysis of seven loci, acsA, aroE, guaA, mutL, nuoD, ppsA and trpE, demonstrated that the prevalent STs were ST-1147, ST-360and ST-111. The majority of the XDR isolates were included in ST-360 and ST-111. ST-1147 is the most

frequent and included non-MDR isolates.
Conclusion : The population structure of clinical P. aeruginosa present in our hospital indicates the coexistence of non-resistant and resistant isolates with the same sequence type, so prevention programs need to be implemented to avoid infection.
Keywords : Pseudomonas aeruginosa, Wound burn, Multidrug-resistant, Multilocus sequence typing

Challenges' home care of patient with burn: A qualitative study

Saba Farzi[1], Sedigheh Farzi[2], Ehsaneh Najari[3]

1. Assistant professor, Faculty of Nursing and Midwifery, Lorestan University of Medical Sciences, Khorramabad, Iran
2. Assistant professor, Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran
3. MSc of Nursing, Emam Musakazem(AS) Hospital, Isfahan University of Medical Sciences, Isfahan, Iran

Background and Aim: Wound management includes changing the dressing, cleaning the wound, disinfecting it, debridement, and applying topical ointments. Physical problems such as scars, contractures, re-infection, pain and chronic itching continue for months and years after the burn. Such problems are effective on the performance and role of the patient in the family, community, and ultimately reduce the quality of life, and it proves the need for planning for long-term care after discharge and home care in burns. The present study was conducted with the aim of revealing the challenges of providing home care to burn patients.

Methods: The study was conducted with a qualitative approach in 2022. The participants were 20 burn patients, family caregivers and care providers for burn patients affiliated with Isfahan University of Medical Sciences, Isfahan, Iran. Participants were selected using a purposeful sampling method. The data collection method was individual interviews. All interviews were recorded, handwritten and analyzed line by line. Conventional content analysis method was used to analyze the data. This study is part of the results of a qualitative study.

Results: Two main categories "unclear structure of home care" and "defective home care" along with five subcategories including ineffective home care referral process, lack of financial transparency of home care, provision of home care by an individual rather than a team, insufficient qualification of care providers at home, the misconception of the concept of home care, which expressed the participants' experiences in the field of home care challenges, were extracted from the interviews.

Conclusion : Considering the needs and problems of burn patients and their

families, the home care program for burn patients is considered a priority that requires reforms including changes in the administrative structure of home care in hospitals, increasing the quality of home care centers, interprofessional collaboration and increasing the awareness of patients and their families about the goals and application of the home care program. Also, the participation of charity organizations, government assistance and insurance coverage is necessary and vital to support the home care program.

Keywords : Burn, Home care, Challenge, Nursing, Qualitative study

Probiotics as an alternative solution to antibiotics for the treatment of burn wound infection with multi-drug resistant bacteria in a mouse model.

Masoumeh Hallajzadeh[1], Mohammah Ali Bahar[2]

1. Department of Microbiology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran
2. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran

Background and Aim : Infections especially by multidrug-resistant (MDR) bacteria are the leading cause of death in patients with extensive burn injuries, with studies showing 42%-65% of burn deaths are attributable to infection. The use of probiotics as an alternative to antibiotics is an attractive method to solve the problem. Our study aimed to isolate probiotics and use them to treat burn wound infections caused by Pseudomonas aeruginosa PAO1 and Acinetobacter baumannii ATCC17978 in a mouse model

Methods : Probiotics were isolated from Fami Lact probiotic capsule of Bio Fermentation Company. In this way, single colonies were grown and multiplied, and then DNA extraction was performed, and PCR was carried out to identify Lactobacillus acidophilus, L. bulgaricus, L. rhamnosus and, L. paracasei in the probiotic capsule. The inhibitory effect of lactobacilli on pathogenic bacteria was evaluated by the spot test method. Then, a Third-degree burn wound was created in Syrian mice weighing 25-30 g, and they were infected with Pseudomonas aeruginosa PAO1 and Acinetobacter baumannii ATCC17978 in separate groups. Finally, four lactobacillus species alone, and in double, triple, and quadruple cocktails were used to treat burn wound infection in 15 groups. The reduction of pathogen colonies was evaluated by the colony counting method.

Results : The antibacterial screening of all Lactobacillus species and their cocktails revealed a different range of antimicrobial activity. In all groups of treatments with probiotic and their cocktails compared to the control groups, a significant decrease in the number of colonies of pathogens from the wound site was observed. The highest antagonistic effect on growth of pathogens was mainly inhibited by Lactobacillus rhamnosus, L. bulgaricus, L. paracasei, and L. acidophilus, respectively. Our finding also showed that the highest antimicrobial ability of cocktails against pathogenic bacteria was mainly inhabited by the quadruple

cocktail, the triple and double cocktails were in the next rank.
Conclusion : The results of this study showed that the use of lactobacilli with probiotic properties and their cocktails can be a suitable option as an alternative method in the treatment of burn wound infections caused by resistant bacteria.
Keywords : Probiotic, lactobacillus, Pseudomonas aeruginosa, Acinetobacter baumannii, MDR

The Metallo-β-Lactamase Producing Pseudomonas aeruginosa Characteristics in burn wounds: Phenotypic and Genotypic Evaluation

Moslem Karampoor[1], Iraj Nikokar[2], Meysam Hasannejad-Bibalan[3], Mohammadreza Mobayen[4], Fatemeh Akhlaghi[5]

1. Department of Microbiology, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
2. Paramedicine Faculty, Laboratory of Microbiology and Immunology of Infectious Diseases, Guilan
3. Department of Microbiology, School of Medicine, Guilan University of Medical Scie-https://www.burn2023.ir/Images/Head-Sem-F.pngnces, Rasht, IR
4. Fellowship in plastic and burn reconstructive surgery, Guilan University of Medical Sciences
5. Department of Microbiology, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Pseudomonas aeruginosa is one of the most opportunistic pathogens causing nosocomial infections and most bacterium isolated from burn wounds. Due to the increasing resistance of this bacterium to antibacterial drugs and especially to Beta-lactam compounds double the importance of their resistance. This study aimed investigation of antibiotic resistance pattern and IMP-1, IMP-2, VIM-1, VIM-2 genes among imipenem resistant Pseudomonas aeruginosa strains isolated from patients with burn wounds in velayat Hospital

Methods : In this descriptive cross-sectional study, 117 isolates of Pseudomonas aeruginosa were collected from burn wounds and after isolation by biochemical tests and antibiotic susceptibility by disk diffusion method as recommended CLSI for 7 antibiotics. All strains that were resistant to imipenem were evaluated using the Combined Disk Method for MBLs and the presence of IMP-1, IMP-2, VIM-1 and VIM-2 genes was determined using Polymerase Chain Reaction (PCR) method

Results : According to the results of antibiogram analysis, the resistance of isolated strains to antibiotics were tobramycin (59%), gentamicin (57%), piperacillin (52%), ciprofloxacin (51%), ceftazidime (32%), Amikacin (26%) was imipenem (24%) and MDR multidrug resistant isolates (38%), 27 isolates were found to be

imipenem resistant and between these isolates, 13 strains were MBL positive by phenotypic method. The frequency of blaIMP1, blaIMP2, blaVIM1 and blaVIM2 genes were 4 (14%), 2 (7%), 4 (14%) and 2 (7%), respectively.

Conclusion : Emerging antimicrobial resistance in burn wound bacterial pathogens is a serious therapeutic challenge for clinicians and MBL-mediated imipenem resistant in P.aeruginosa is a cause for concern in the treatment of infective burn patient. This study showed an increase in the antibiotic resistance of Pseudomonas aeruginosa due to the production of metallo-beta-lactamase. Therefore, due to the clinical importance of these resistant strains in the studied hospitals, rapid identification of the organism producing these enzymes and the use of appropriate infection control tools are necessary to prevent further spread of these organisms

Keywords : Pseudomonas aeruginosa, Burn wounds, Antibiotic

ESR, CRP, and WBC serum levels in burn patients and their relationship with the prognosis of burn patients referred to Imam Khomeini Hospital, Ilam, Iran

Arian Karimi Rouzbahani[1], Dr. Sajad Hattami[2], Samaneh Tahmasebi Ghorabi[3]

1. Student Research Committee, Lorestan University of Medical Sciences, Khorramabad, Iran
2. Division of Plastic Surgery, Department of Surgery, Ilam University of Medical Sciences, Ilam, Iran
3. MSc of Health Education, Research Expert, Clinical Research Development Unit, Emam Khomeini Hospital, Ilam University of Medical Sciences, Ilam, Iran

Background and Aim : Burn injuries are one of the treatment problems in developing countries and include about 9% of hospitalization cases. In spite of all the advances in the field of control and treatment of burn wounds and the existence of special care for these patients, the main cause of death in burn patients is infection, so checking the serum level of laboratory factors that indicate an infection such as ESR, CRP, and WBC It can predict the occurrence of infection in these patients, so this study was conducted with the aim of investigating the effect of these factors on the prognosis of these patients.

Methods : In this study, informed consent was obtained from the patients upon arrival, and demographic information, type, and percentage of their burns were recorded. On the second day of hospitalization, the patient's blood samples are taken and sent to the laboratory to be checked for ESR, CRP, WBC, and PMN levels. The patients were visited daily during hospitalization, and the indicators of death and the number of days of hospitalization of each patient were examined as criteria for evaluating the prognosis. Data analysis was done using SPSS20 software.

Results : In the first six months of 2017, 49 patients met the conditions for entering the study; 53% of them were men. The average burn percentage of patients was 20.88%, and the most common burn mechanism was hot water (46.9%). The patients' average hospitalization duration was 10.48±5.65, and the death rate was 14.3%. There was a significant relationship between the laboratory factors of WBC and PMN with the death of patients and the ESR factor with the duration of their hospitalization. (P value was 0.000, 0.002 and 0.001 respectively.)

Conclusion : The blood level of WBC and PMN can be a reliable factor in predicting the death of burn patients. The ESR level of burn patients can also be used as a prognostic factor for the duration of hospitalization of burn patients.
Keywords : Burn, Mortality, Prognosis, ESR, CRP, WBC

Suicidal continuum (ideation, planning, attempting) in patients with self-immolation

Majid Khadem-Rezaiyan[1], Amirmahmoud Ahmadzade[2], Ali Ahmadabadi[3], Arezou EbrahimNejad[4], Mohamad Baghban[5], Zahra Mehrabadi[6]

1. Assistant Professor, Department of Community Medicine, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
2. Medical Student, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
3. Associate Professor, Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
4. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
5. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
6. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : Suicide is a global public health issue. Many factors affect suicide including psychological, social, biological, cultural, and environmental factors. Suicide is not even an isolated event, but a continuum of processes starting from suicidal ideation (SI), suicidal plan (SP), and suicide attempt (SA), to suicide completion. This study aimed to identify the characteristics of suicidal ideation, suicidal plan, and suicide attempt in patients who had self-immolation.
Methods : This cross-sectional study was performed in the only academic burn care center in Mashhad. All suicide attempters with self-immolation who were admitted during 2017-2019 and agreed to participate in the study were included. The previous twelve-month SI, SP, and lifelong SA (prior to the current suicide attempt) were obtained. Data were analyzed using SPSS version 28.
Results : Among the 44 examined patients, 44% had SI in the last 12 months, apart from the current incident, and the average age of the first SI was 21.2 ± 10.3 years (median=18). Also, 33% had SP in the last 12 months apart from the current incident and the average age of the first SP was 22.2 ± 10.7 years (median=19). Overall, 84% had a previous suicide attempt. The first SA happened at age 22.4 ± 10.4 years (median=19.5).

Conclusion : Various components of the suicide continuum are very close together in patients with self-immolation and there is only one year gap between SI and SP and nearly 2.5 months between SP and SA. This calls for instant actions when encountering patients with SI.
Keywords : Suicide, Ideation, Attempt, Plan, Suicidal behavior

Effect of probiotic administration in Inflammatory Responses of thermal burns

Sanaz Masoumi[1], Mohammadreza Mobayen[2], Marjan Mahdavi-Roshan[3], Ardalan Majidiniya[4], Sepideh Pirdastan[5]

1. Master of nursing , Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences,Rasht, Iran
2. Assistant Professor, Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences,Rasht, Iran
3. Cardiovascular Diseaede Research Center, Department of Cardiology, Heshmat Hospital, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
4. Medical Student , Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences,Rasht, Iran
5. Medical Student , Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences,Rasht, Iran

Background and Aim : It is possible to damage the natural intestinal barrier following severe burn injuries. The positive effects of oral probiotics on either innate immune system or intestinal epithelial layer are proven. This research aimed to evaluate the role of probiotics on plasma inflammatory changes and bacterial colonization in burned wounds after high-grade thermal trauma.

Methods : : This double-blinded randomized controlled trial was conducted on 80 patients with a burn percentage of 20-70%. Patients were allocated to two groups based on four blocks randomization model. Intervention and control groups received daily LactoCare and placebo capsules respectively for 14 consecutive days. Obtaining demographic data, burn and gastrointestinal symptoms were registered by filling out a questionnaire. Additionally, measuring plasma levels of highly sensitive C-reactive protein(hs-CRP), IgA, absolute neutrophilic and lymphocysytic count were perdformed cumulatively four times prior to and after the intervention. Also, the study of burned wounds included bacterial culture, and healing of the area of involvement was conducted.

Results : Considering eligible data, following the study period analysis showed significant mitigation of inflammatory status in probiotic receivers. The hs-CRP reduced obviously following probiotic (21.38±44.45) consumption compared

with placebo (-36.36±79.03) intake (P<0.001). Also, the plasma level of IgA significantly decreased in the intervention group (0.88±0.65) than in the control group (0.79±0.18) (P<0.001). Wound cultures showed no significant difference between groups although the incidence rate of bacterial colonization was slightly lower after using probiotic (P=0.159). Regarding wound healing, data illustrated probiotics could accelerate the repair of the wound after 14 days of regular consumption(P<0.001).

Conclusion : Probiotics have advantages for mitigation of inflammation and wound healing following severe thermal burn injuries

Keywords : Burn; CRP; IgA; Probiotics; Wound healing

Early marjolin's ulcer after hand burn

Aliakbar Mohammadi[1], Ali Foroutan[2], Soheil Mohammadi[3], M.H. Anbardar[4], Somayeh Rajabpoor[5]

1. Burn and Wound Healing Research Centre, Shiraz University of Medical Sciences, Shiraz, Iran
2. Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran
3. Department of Pathology, Shiraz Medical School, Shiraz University of Medical Sciences, Shiraz, Iran
4. Department of Pathology, Shiraz Medical School, Shiraz University of Medical Sciences, Shiraz, Iran
5. Burn and Wound Healing Research Centre, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Marjolin's ulcer refers to any malignant transformation of chronic wounds. Different chronic wounds may be transformed into malignancies, although they usually have a latency period of between 25 to 40 years after the primary injury.

Methods : A 65-year-old man was referred to our clinic with a nonhealing ulcer after contact burn with a hot pot three weeks prior to the visit. We found a 3-centimetre in diameter wound with unusual elevated margins on the dorsal surface of his right hand . There was no lymphadenopathy on physical examination. The patient was otherwise healthy. He was a nonsmoker and had no family history of malignancy. He had a history of occupational asbestos exposure for many years but no history of radiation or chemical exposure. The histopathology of the lesion was well-differentiated squamous cell carcinoma.

Results : We herein present an otherwise healthy man who developed squamous cell carcinoma (SCC) three weeks after burn injury. It is an interesting case because of this acute transformation into SCC, and may be considered as different to the usual presentation of Marjolin's ulcers.

Conclusion : Few cases of very early Marjolin's ulcer have been reported in the literature. We think that these acute transformations can be considered as a different phenomenon, and need more precise investigation. Based on our reports, any non-healing acute burn wound with bizarre appearance should be an alarm sign and needs early biopsy

Keywords : Marjolin's ulcer, SCC, keratoacanthoma, burn scar, BCC

Detection of Extended Spectrum β-lactamases and Metallo β-lactamases in Pseudomonas Aeruginosa isolated from Burns patients

Neda Pirbonyeh[1], Amir Emami[2], Fatemeh Javanmardi[3], Marziyeh Mansouri[4], Mitra Zadosht [5]

1. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Department of Biostatistics, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran
4. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
5. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.

Background and Aim : Pseudomonas aeruginosa (PA) is a severe challenge for antimicrobial therapy, due to the chromosomal mutations or exhibition of intrinsic resistance to various antimicrobial agents such as most β-lactams. There are three major groups of β-lactamase enzymes, MBLs, and ESBLs forming PA is a major issue for the treatment of burns victims.
Methods : A total of 50 clinical isolates related to PA have been obtained from the burns specimens. The susceptibility test was performed by the disc-diffusion method. All of the meropenem-resistant strains were subjected to a modified Hodge test for the detection of carbapenems. Multiplex polymerase chain reaction was performed for the detection of the presence of ESBLs; blaSHV and blaTEM, genes; and MBLs; blaIMP, blaVIM, and blaSME genes.
Results : it was found that the susceptibility of PA isolates towards Tobramycin, Piperacillin, and Carbenicillins, while PA isolates' susceptibility towards colistin was. Extended-spectrum ?-lactamases producing PA was 25 % while MBL producing PA was 69 % by double-disk synergy test, in general, the percentage of PA producing ESBL and MBL was 9%. Amplification of ?-lactamase genes showed the presence of blaVIM genes in 12% strains and blaIMP genes in 24% strains. All of the isolates were negative for blaSME genes.
Conclusion : As patients with infections caused by MBL-producing bacteria are at an intensified risk of treatment failure, fast determination of these organisms is necessary. Our findings may provide useful insights in replace of the appropriate antibiotics and may also prevent MBLs mediated resistance problems.
Keywords : Beta-lactamases, ESBL, MBLs, Pseudomonas aeruginosa

Prevalence and Risk Factors for Delirium in burn patients admitted to burn care unit in north of the iran

Sajjad Rahattalab[1], Mohammadreza Mobayen[2], Adeleh Eisanazar[3], Mojdeh Esmailzadeh[4], Nasr althafef[5], Faranak Yeganhdoost[6], Siyamak Rimaz[7]

1.2.3.4.5.6.7. Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Delirium is described as an attention and consciousness disruption that appears suddenly. High rates of delirium risk factors, such as vertigo, inflammation, and extended hospitalization, are associated with burn care. Our goal was to examine the prevalence of delirium and its related factors in adult burn patients in a hospital.

Methods : This cross-sectional analytical study aimed to determine the prevalence and factors related to delirium in burn patients admitted to Velayat Hospital in 1401. Patients were included in the study after checking the entry and exit criteria and confirming permission from the patients. In this study, patients' demographic and clinical characteristics were extracted from the medical record and recorded in a checklist prepared by investigators. In addition, the Delirium Assessment Nursing Scale (Nu DESC) was used to examine the patients in terms of the presence or absence of delirium. The collected data were entered into IBM SPSS Statistics version 26 and analyzed.

Results : Among the 84 patients, 81% were male. The mean age of patients was about 44 years. Most of the cases were 42.1% of second-degree burns. The ratio of delirium was 22.66%. The mean TBSA was 39.38±51.11%. The average number of surgeries was 2.76 ± 1.75. The length of hospital stays and ICU days were obtained 10.75±5.74 and 4.83±4.4 days, respectively. The mean laboratory markers CRP, ESR, WCC were 2.76 ± 1.75, 2.32 ± 53.32, and 13.99 ± 4.29.

Conclusion : Based on the findings of this research, which was conducted on the basis of a sample of 84 patients hospitalized in the special care department of the educational and medical center of the province in the first six months of 1401, it can be said that the average age of Mecca, percentage of burns, the duration of hospitalization in ICU and the number of surgeries as well as the laboratory markers CRP, ESR, WCC in the two groups of patients with delirium

and without delirium were significantly different. Also, the results of the logistic regression model showed that the variables of age, percentage of burns, duration of hospitalization in ICU and number of surgeries are able to predict the condition of delirium.

Keywords : Burn, Delirium, Intensive Care

بررسی قطر قدامی خلفی ورید اجوف تحتانی به عنوان معیار کفایت مایع درمانی در بیماران

Farhang Safarnejad[1], فرهنگ صفرنژاد[2], محمد عباسپور[3]

۱. متخصص جراحی عمومی و فلوشیپ جراحی سوختگی -استادیار گروه جراحی - دانشکده پزشکی سنندج - بیمارستان کوثر
۲. رزیدنت جراحی عمومی - دانشکده پزشکی سنندج - بیمارستان کوثر
۳.

Background and Aim : هدف از مطالعه جاری بررسی قطر قدامی خلفی IVC بعد از مایع درمانی به عنوان معیار کفایت مایع درمانی و مقایسه آن ب ا CVP بود.
Methods : برای اندازه گیری قطر قدامی –خلفی IVC از همکاری یک متخصص رادیولوژی و دستگاه سونوگرافی ...مدل... استفاده شد. همچنین CVP توسط کاتتر وریدی مرکزی تعیین شد و اطلاعات دموگرافیک نیز در یک چک لیست ثبت گردید
Results : بین قطر قدامی خلفی IVC و CVP در هنگام دم همبستگی مثبت معناداری وجود داشت) r= ۰.۵۹, P=۰.۰۰۴ (. در هنگام بازدم نیز همبستگی مثبت و معنادار بود) r= ۰.۵۶, P=۰.۰۰۶ (. نتایج آنالیز رگرسیون خطی نیز نشان داد به ازای هر واحد افزایش قطر CVP ، IVC به اندازه ۰.۴۹۵ در حالت دم بالا می رود و به ازای هرواحد افزایش قطر CVP ، IVC به اندازه ۰,۴۵۷ در هنگام بازدم بالا می رود که معنادار بود.
Conclusion : مطابق یافته های مطالعه جاری و مطالعات مشابه اندازه گیری قطر قدامی خلفی IVC در حالت دم و بازدم با استفاده از سونوگرافی می تواند به عنوان یک شاخص برای کفایت مایع درمانی و به عنوان روشی غیر تهاجمی و سریع در بیماران دچارسوختگی، سقوط، تروما و تصادف مطرح باشد.
Keywords : مایع درمانی - قطر IVC- فشار ورید مرکزی- سوختگی

The effect of multimodal exercise and egg white diet on inflammatory markers interleukin 6 and CRP, body composition and muscle strength in burn patients after discharge

Parichehr Soleimani[1], dr.Mehdi Kargarfard[2]

1. Department of Physical Education and Sport Sciences, Faculty of Sport physiology, Khorasgan Branch, Islamic Azad University, Isfahan, Iran
2. Faculty of Physical Education and Sport Sciences, University of Isfahan, Isfahan, Iran

Background and Aim : Multimodal exercise along with diet containing egg white is considered as an effective treatment method in improving inflammation and increasing muscle strength of burn patients. The present study was conducted with the aim of investigating the effectiveness of the combination of multimodal exercise training and diet containing egg white on the inflammatory markers interleukin 6 and CRP, body composition and muscle strength of burn patients after discharge.

Methods : 23 male and female patients with 20-60% burns with an average age of 34 years were randomly divided into two groups. In this study, subjects (11 people) participated in the control group (exercise) and (12 people) in the experimental group (exercise and egg white). All patients received multimodal training consisting of three 60-minute sessions per week for 12 weeks. The experimental group took a protein supplement (egg white) after each training session, and the control group was given a placebo after each training session. In this research, variables of weight, body mass index, body composition using calipers, muscle strength with isokinetic dynamometry, interleukin 6 with ELISA method and CRP were measured before and after the study period in the subjects.

Results : In the training group and egg white compared to the training group alone, there was a significant decrease in interleukin-6 (1.93±0.57 vs. 2.39±0.69) and a significant increase in muscle strength (34.50±6.22). In contrast, 28.55±3.01) was observed ($p \geq 0.05$). While, the body mass index, weight, body fat percentage, body fat mass, net body mass and CRP of the studied groups after twelve weeks of intervention, no significant change was observed in comparison with the baseline state.

Conclusion : The findings of this study showed that the combination of mul-

timodal exercise with egg white consumption in burn patients can be an important strategy in reducing inflammatory markers and increasing the muscle strength of patients and is recommended as part of the treatment of these patients after discharge.

Keywords : IL-6, CRP, body composition, muscle strength, resistance training, arobic training

Comparing the results and complications of early excision and grafting method with late excision and grafting method in Imam Reza Hospital patietns during 2019 and 2020

Seyed Hassan Tavousi[1], Majid Rezaeeian[2], Zahra Mehrabadi[3], Marzieh Taghizaseh[4]

1. Cancer research center.MUMS
2. Assisstant professor of community education medicine.Mashhad University of Medical Sciences. Mashhad .IRAN
3. Burns and reconstructive surgery department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
4. Burns and reconstructive surgery department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : Burns are annoying skin lesions that may bring malformations and dysfunctions for the affected part of the body. One of the treatment of these skin lesions is skin grafts. This skin grafting can be conducted by two methods including early and late grafting methods. There are controversies regarding the comparison of the two methods in case of efficacy and complications. The aim of our study is to compare the results and complications of early excision and grafting (EEG) method with late excision and grafting (LEG) method
Methods : This cohort study was conduted in burn wound care department of Imam Reza hospital during 2019 and 2020. Sampling was conducted accoding to the available method. The inclusion criteria were acute burn cases aged more than 18 years old, who reffered during the time of study and were provided with written informed consent. Patients with underlying diseases like diabetes, chronic kidney disease, and steroids adherence or those who engaged lost to follow up during the first week were excluded
Results : Results: Totally, 88 patietns including 44 EEG and 44 LEG were enrolled in the study. There was no significant difference between the two study groups in case of gender (p=0.493). Assessment of the trend of Vancouver score with the repeated measure ANOVA test showed that the scores were completely downward in EEG group; howere, in the LEG group the after a downward trend another upward increase was developed. These differences in the trend of Vancouver score were signficaintly different (p<0.001). Moreover, the assessment of

quality of life score in the three visist showed that the quality of life was increasing steeply in the EEG group but decreased after an increase in the LEG group. The differences with this regard were also significant (p=0.010). Still, the trend of patients' itching sensation during the three visits showed no notable difference (p=0.252).

Conclusion : In conclusion, our study showed a superiority for EEG method compared to the LEG method in case of complications and quality of life. However, further studies are needed to complete these results.

Keywords : Burns, early excision and grafting late. excision and grafting, quality of life, complications

Investigating factors related to serum albumin level and its consequences in burn patients

Mohammad Tolouei[1], Mohamadreza Mobayen[2], Sirus Amiralavi[3], Maryam Ramezanian[4], Mojdeh Esmailzadeh[5]

1. Guilan University of Medical Sciences,Rasht, Iran . ORCID: 0000-0003-0240-3631
2. Assistant Professor, Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences,Rasht, Iran
3. Guilan University of Medical Sciences, Rasht, Iran
4. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : : The type, amount, and factors causing burns differ according to the variety of lifestyles in different regions of the world. Patients who suffer burns, especially in a large area of the body, lose a large amount of their intravascular albumin and, as a result, suffer from chronic hypoalbuminemia. The results of this study can determine the serum albumin level as a valid indicator to determine the condition and outcomes of burn patients, including the duration of hospitalization, the need for intubation, the need for skin grafting, the incidence of infection and the condition at discharge

Methods : : The study population includes all patients over 16 years of age referred to the provincial hospital of Gilan University of Medical Sciences in 2019. The information of the patients was extracted from their files in the form of a checklist, which includes the overall average age of the patients, sex, cause of the burn, skin graft rate, incidence of infection, body mass index, and a number of days dependent on the ventilator and the length of the patient's hospitalization. Also, the laboratory values (including serum albumin level, creatinine level, CBC, BUN serum level, and calcium serum level) were collected, and SPSS version 24 software was used to analyze the data.

Results : The results showed that the mean serum level of albumin for patients on the first day of 2.93, on the seventh day 3.05 and at the time of discharge was 2.97. There is a significant difference in the average serum level of the albumin in

the first and then the other two sections (p = 0.002). The results also showed that there was a significant relationship between the serum level of the albumin and the percentage of burns and the duration of hospitalization (p <0.05).
Conclusion : The results generally showed that due to the prevalence of hypo-albuminemia in hospitalized patients due to acute burns, it is necessary to take appropriate measures to compensate for the lost albumin.
Keywords : Burn, Albumin, consequences , burn patients

Evaluation of Amnion Sheet Dressing efficiency in comparison to Silver-bases dressing on the Healing of Burn Wounds

Amin Ghanei anaraki[1], mehrdad adib parsa[2], majid kalbasi[3], Pouria Tavakoli[4]

1. Department of Aesthetic, Plastic and Reconstructive Surgery, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran
2. Department of Aesthetic, Plastic and Reconstructive Surgery, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran
3. Department of general Surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.
4. Department of general Surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.

Background and Aim : intermediate depth burns or second-degree burns are one of the most prevalent referred-to burn clinics. In most cases, proper dressing and care to prevent wound complications can be the most effective treatment. In this study, the efficacy of two different dressings, one amnion biological dressing, and the other silver-based dressing, on wound healing has been evaluated.
Methods : This study is a randomized clinical trial that was performed after obtaining permission from the ethics committee and registering in the IRCT at the Imam Musa Kazem Burn Hospital from 2020 to 2022 on second-degree burn patients who did not indicate excision. There were two groups in this study, group one includes 25 patients, which their wounds were covered with a silver-based dressing (Ag-coat) for 7 days. In group two, there were also 25 cases, in which the wounds were dressed with sterile acellular amnion sheets. These groups were statically analyzed and compared with each other in terms of the parameters consisting of the wound healing period, wound infection rate, pain in acute phases, ansts, and wound scar condition (VSS criterion).
Results : There were statistically significant differences between the groups in scar condition after 6 months and pain in the acute phase but there was no difference in the rate of wound infection
Conclusion : In intermediate-depth burns, the attitude toward dressings that leave minimal complications is increasing, among which Amnion dressing, due to its inclusion of different biologically active factors such as collagen, fibronectin, laminin, proteoglycan, and glycosaminoglycan can be used as an effective dressing.
Keywords : burn wound, acellular amnion, silver-based dressing

Evaluation of early use of silver-based wound dressing (Ag-coat) in combination with delayed excision compared to early excision in patients with deep extremities burns

Amin Ghanei anaraki[1], mehrdad adib parsa[2], majid kalbasi[3], Pouria Tavakoli[4]

1. Department of Aesthetic, Plastic and Reconstructive Surgery, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran
2. Department of Aesthetic, Plastic and Reconstructive Surgery, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran
3. Department of general Surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.
4. Department of general Surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.

Background and Aim : In managing deep burn wounds, two distinct approaches have been considered, and each of them has advantages and disadvantages. Although the first approach is very suitable for limited resection as much as possible, it will be associated with wound infection, while the second approach can also be related to subsequent complications due to the extension of resections. Considering the drawbacks of both approaches, an intermediate method can be considered, which is an early cover of the wound with silver-based dressing to reduce the rate of wound infection and delay resection in continue.

Methods : This study is a randomized clinical trial that was performed after obtaining permission from the ethics committee and registering in the IRCT at the Imam Musa Kazem Burn Hospital from 2020 to 2022 on patients with deep extremities burns. There were two groups in this study, group one includes 25 patients, which their wounds were covered early with a silver-based dressing (Ag-coat) and after seven days, were transferred to the operating room, the dressing was removed, the necrotic areas were excised and reconstructed with skin autograft if necessary. In group two, there were also 25 patients whose wounds underwent early excision and autograft reconstruction. These groups were statically analyzed and compared with each other in terms of the parameters such as wound infection rate, transfusion, hospitalization duration, and costs, wound scar status(VSS and POSAS), joint contracture, and mortality.

Results : There were Statistically significant differences between the groups in scar status, transfusion required, and the duration and costs of hospitalization, but there were no differences in the rate of wound infection, joint contracture, and mortality.

Conclusion : In this study, the extent of skin resection after burns in the early use of silver dressing was less as a result of a better scar prognosis. There was no difference in contracture, although this factor may be different between the two groups in the longer follow-ups. Therefore, the use of silver-based dressing can be used as an effective treatment method for extremities burns.

Keywords : burn wounds, Early excision, Delayed excision, Silver-based dressing

Comparison of the effects of biological (amniotic) with traditional dressings in the treatment of deep second degree burn wounds 5-20%

Marjan Hajati[1], Mohamadreza Mobayen[2], Sanaz Masoumi[3], Meraj Alaei Poursamak[4], Amir Mohamad Gholipour[5]

1. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
2. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
3. Master of nursing , Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences,Rasht, Iran
4. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : One of the important areas of treatment in burns is the types of dressings used that play an important role in the process of treatment and recovery of patients. Therefore, the aim of this study was to compare the effect of biological dressings (amniotic fluid) with traditional dressings in the treatment of burn wounds less than 24 hours, second-degree depth of 5-20% in patients referred to Rasht hospital,to reveal the effectiveness of biological dressings with amniotic membrane

Methods : In this clinical trial study, 50 patients with second-degree deep burns less than 20% of the surface were included in the study. These patients were randomly divided into two groups of 25, group A (treated with biological dressings (amniotic fluid)) and group B (treated with traditional dressings). A checklist prepared by the researcher was used to collect data. For all patients during this period, the number of their replacement dressings and the type of dressings used in the checklist were recorded and followed by a 30-day or 95% wound healing period depending on the extent of the burn

Results : In this study, 50 patients were included and 25 patients were in each group. Of these, 26 (52%) were female and 24 (48%) were male. The mean age of patients was 38.44 17 17.02 years, the minimum age was 18 years and the maximum was 58 years. Based on the results of our study, there was a signifi-

cant difference in the need for readmission in the two groups (P = 0.041). Recovery (P = 0.03), pain (P = 0.001), and a number of dressing changes (P = 0.0001) showed a significant difference between the two groups, and based on the same statistical test, there was a significant difference in other parameters. Dari was not observed (P> 0/05).

Conclusion : Overall, according to the results obtained in this study, it seems that the use of biological dressings in patients with burns is better, easier,more cost-effective, and far less complicated than the conventional antimicrobial method; Therefore, this method is recommended as an alternative method in the treatment of burn patients

Keywords : Burn, Amniotic, Dressing, Biological, Antimicrobial

Development of antibacterial acellular dermal matrix scaffold as a potential skin substitute

Seyedeh Sara Hashemi[1], Alireza Rafati[2], Abdolkhalegh Keshavarzi[3]

1. Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
2. Division of Pharmacology and Pharmaceutical Chemistry, Sarvestan Branch, Islamic Azad University, Sarvestan, Iran.
3. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Tissue engineering, a novel approach in dermatology, resulted in the development of scaffolds as biological wound dressing that accelerated wound healing. The aim of present study was to synthesize acellular dermal matrix (ADM) as regenerative wound dressing and assessed the effect of zinc oxide nanoparticles (ZnO-NPs) on the burn wound healing.
Methods : ADM from fresh, full-thickness human skin and ZnO-NPs was loaded on by sonication. Later the mechanical, morphological, histological and antibacterial properties of prepared scaffolds were characterized. Next, we assessed the adhesion and proliferation of the fibroblastcells on the scaffold by SEM, MTT and. For animal studying, the 36 rats were divided into four equal groups at random (ADM, ADM-ZnO-NPs, siver and negative control groups). Wound healing was assessed macroscopically, histologically and by real-time PCR for VEGF, Bax and Bcl-2 gene expression during the time interval.
Results : The ADM characterization results showed that the scaffold was dense and integral with good stretching. The ADM-ZnO-NPs had significant antibacterial effects against both gram negative and positive bacteria. The fibroblast cells cultured on the ADM showed proliferation, which improved by the addition of ZnO-NPs. In animal models ZnO-NPs addition caused significantly improved wound healing compared with isolated ADM; it also resulted in increased VEGF, Bcl-2 and reduced Bax expressions.
Conclusion : Combination of ADM and ZnO-NPs could apply as a regenerative wound dressing and represent a novel therapeutic methodology for treating burns and chronic wounds.
Keywords : Biological wound dressing, Wound healing, A cellular Dermal Matrix, Zinc oxide nanoparticles , Burn wound healing.

polyacrylic acid/ polyvinylpyrrolidone hydrogel wound dressing containing zinc oxide nanoparticles promoted wound healing in a rat model of excision injury

Mohammad Reza Mobayen[1], Mohsen Shahrousvand[2], Seyyedeh Sahra Mirmasoudi[3], Zahra Pourmohammadi-Bejarpasi[4], Alireza Feizkhah[5]

1. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
2. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
3. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
4. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Developing and designing efficient wound dressings, the subject of intensive basic or clinical research investigations. Although hydrogel-based wound dressings have gained increasing attention and shown beneficial results in improved wound healing effects, they are not yet able to heal complex wounds. This study was conducted to improve wound healing properties and introduce a novel potential wound dressing.

Methods : a novel hydrogel based on polyvinylpyrrolidone/poly acrylic acid containing Zinc oxide nanoparticles were prepared as an antibacterial wound dressing and examined in a rat excisional wound model. this Hydrogel prepared by free radical polymerization using potassium persulfate (KPS) as an initiator, N, N-methylene bisacrylamide (MBA) as a crosslinker, poly acrylic acid (PAA) as a monomer in the presence of polyvinylpyrrolidone (PVP) and Zinc oxide nanoparticles. Analyses such as SEM, FT-IR, XRD, and TGA were used to study morphology structure. After choosing the optimal sample, in¬-Vivo characterization of excisional wound injury on a rat model was done.

Results : The therapeutic potential of the polyacrylic acid/ polyvinylpyrrolidone hydrogel wound dressing containing zinc oxide nanoparticles was investigated

in a rat model of excisional injury compared to the control group. Our results showed that the polyacrylic acid/ polyvinylpyrrolidone hydrogel wound dressing containing zinc oxide nanoparticles accelerated wound contraction, had antibacterial effects, and promoted wound healing compared to other groups.
Conclusion : In conclusion, this study shows that synthesized Hydrogel can be used to treat skin injuries in humans
Keywords : Wound Dressing, Hydrogel, ZnONps - Polyvinyl pyrrolidone (PVP) / polyacrylic acid (PAA)

Fabrication and characterization of Sargassum Glaucescens Extract (SGE) embedded in marine-derived collagen for burn wound healing

Soheila Naderi Gharahgheshlagh[1], Tayyeb Ghadimi [2], Noorahmad Latifi [3], Ahmad Hivechi [4], Vahid Hosseinpour Sarmadi [5], Naser Amini [6], Peiman B. Milan [7], Siamak Farokh Forghani[8], Abolfazl Abbaszadeh[9]

1. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran
2. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran
3. Department of Plastic and Reconstructive surgery, Hazrat Fatemeh Hospital, School of Medicine, Iran University of Medical Sciences, Tehran, Iran
4. Martin-Luther-University Halle-Wittenberg, Institute of Pharmacy, Halle (Saale), Germany
5. Institutes of Regenerative Medicine, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences, Tehran, Iran.
6. Cellular and Molecular Research Center, Iran University of Medical Sciences, Tehran, Iran.
7. Institutes of Regenerative Medicine, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences, Tehran, Iran.
8. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran
9. Department of Plastic and Reconstructive surgery, Hazrat Fatemeh Hospital, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

Background and Aim : Burn injuries are complicated wounds to manage with substantial tissue damage and extensive fluid loss. Wound treatment and rapid epithelialization to enhance healing and restore skin function can be resolved by developing wound dressings based on natural and biological materials.
Methods : Hence, in this study, the potentiality of collagen (Col) scaffold derived from Rainbow trout (Oncorhynchus mykiss) and possible bioactive phytochemical constituents from the Sargassum glaucescens extract (SGE) were evaluated for promoting Grade 3 burn wound healing. Collagen/SGE (1-3 mg/ml) scaffolds were synthesized and then physiochemically (SDS-PAGE assay, morphology analysis, FTIR spectroscopy, thermogravimetric analysis, water contact angle, and swelling behavior) and biologically (antioxidant activity, biodegradation, antibacterial, MTT assay, cell morphology, and in vivo experiments including macroscopic appearance and histopathological parameters) characterized.

Results : The physicochemical analysis confirmed the type of collagen (type I, α1 and α2), the bioactive component of SGE, successful incorporation of the SGE into collagen scaffolds (Col/SGE), the thermal stability of Col/SGE blend, and excellent hydrophilicity and water absorption capacity of produced scaffolds. Moreover, biological experiments approved the excellent antioxidant and antibacterial activity of SGE, structural stability improvement against enzymatic degradation, and cell proliferation enhancement without cell toxicity. Antibacterial and cell viability assessments showed that the Col/SGE 3mg/ml sample exhibits the highest cell activity. Moreover, in vivo use of Col/SGE on the burn wound on rat models displayed a faster healing rate and animals treated with Col/SGE showed greater re-epithelialization and dermal remodeling, less inflammatory cells, more abundant fibroblast cells, and collagen accumulation.

Conclusion : Therefore, the obtained results suggested that the collagen/SGE scaffold may have a great potential for the wound environment as it is structurally stable and could enhance cell proliferation without cell toxicity.

Keywords : Oncorhynchus mykiss, S. glaucescens extract, collagen scaffold, burn wound healing.

Herbal medicine in the treatment of burn patients

Siamak Farokh Forghani[1], Soodabeh Hoveidamanesh[2], Rana Irilouzadian[3], Tooran Bagheri[4], Mahdy Saboury[5], Shirin Fahimi Tafreshi[6], Tayyeb Ghadimi[7]

1.2.3.4.5.6.7. Burn research center, Iran University of medical sciences, Tehran, Iran

Introduction: Burn injuries are one of the leading concerns in developing countries. According to the reports of the World Health Organization, more than 180,000 burn patients die every year, most of them from low- and middle-income countries. Immediate management of burn wounds can reduce morbidity and mortality. Many people tend to treat burn wounds at home before reaching a medical center with an available, efficient, and cost-effective treatment. Therefore, studies to search for these drugs are still ongoing.

Considering the high consumption of traditional treatments and the lack of enough studies on the effectiveness of these treatments, we aimed to review articles on the use of traditional and complementary medicine, focusing on how they affect healing, debridement, and hypertrophic scars, and their side effects.

Methods: We asked plastic surgeons and traditional medicine specialists for their opinion on keywords. We conducted the literature search in international databases Pubmed, Google scholar, Ovid, Scopus, web of science, and Cochrane library, as well as Persian databases SID, Magiran, Iranmedex, and Irandoc. Retrieved hits were reviewed by three authors for screening based on inclusion and exclusion criteria and the screening process is expressed as PRISMA framework flow chart.

Results: 127 studies, consisting of 111 animal studies and 16 clinical trials, were included. 9 clinical trials evaluated wound treatment, 4 evaluated control of pain, anxiety, pruritus, and sun protection, and 3 evaluated inhalation therapy for pain, anxiety, sleep quality, and changes in vital signs at the time of dressing change. 15 studies showed equal or improved effects compared to common treatments. Aloe vera (topical), Rose (inhalation), chamomile, and lavender (topical and inhalation) were used in more than one study. There were no adverse effects reported in the studies. Animal studies were conducted mostly with the aim of wound healing. Most of the interventions were herbal and Aloe vera was the most common plant used.

Conclusion: We revealed that traditional medicine is useful in burn wound treatment, however, variable ingredients in traditional medicine brings up the need for further controlled prospective studies.

Keywords: Complementary Medicine, Traditional Medicine, Burn

Porcine xenografts in treatment of burn patients

Rana Irilouzadian[1], Amirmohammad Khalaji[2], Hediyeh Baghsheikhi[3], Roham Sarmadian[4], Tayyeb Ghadimi[1], Soodabeh Hoveidamanesh[1], Siamak Farokh Forghani[1,*]

1. Burn research center, Iran University of medical sciences, Tehran, Iran
Emails: Ranairilouzadian@gmail.com , tayyeb.ghadimi5@gmail.com , hoveidamanesh@gmail.com , siamakfarokh@yahoo.com
2. School of Medicine, Tehran University of Medical Sciences, Tehran, Iran Email: amirm.khalaji@gmail.com
3. School of medicine, Shahid Beheshti University of medical sciences, Tehran, Iran, Email: Hediyehbaghsheikhi@gmail.com
4. Infectious diseases research center, Arak university of medical sciences, Arak, Iran, Email: rsarmadian@yahoo.com
* Corresponding author: Siamak Farokh Forghani
Burn Research Center, Iran University of medical sciences, Tehran, Iran.
E-mail: siamakfarokh@yahoo.com
Address: Motahari Hospital, Shahid Yasemi St., Valiasr St., Tehran, Iran

Background: Although autografts are not possible in patients with extensive burn wounds, allografts and xenografts are used as temporary coverage. In this systematic review and meta-analysis, we compared outcomes between porcine xenografts and standard treatment of burn wounds.
Methods: International online databases were searched for English articles comparing porcine xenografts with routine treatment in burn patients. The random-effect model was used to estimate standardized mean differences (SMD) or odds ratio (OR) with a 95% confidence interval (CI).
Results: From a total of 7144 records, 7 studies were included in our review after screening by title and abstracts followed by full-texts. No significant difference between hospital stays was found (SMD [95% CI] = -0.18 [-0.54 – 0.18]). The mean number of dressing changes was significantly lower in porcine xenograft compared to the control (SMD [95% CI] = -1.01 [-1.61 – -0.41]). In addition, re-epithelialization time was lower or equal to other dressings in the porcine xenograft group.
Conclusion: Porcine xenografts showed a significantly lower number of dressing changes. However, the length of hospital stays and days to re-epithelialization showed no significant benefit in porcine xenografts compared to routine treatment.

Clinical trials of autologous epidermal cell transplantation in hypopigmented burn scar spot treatment

Noorahmad Latifi[1], Tayyeb Ghadimi[1,2], Mohammadreza Ghasemi[1],Soheila Naderi Gharahgheshlagh[1,2] *, Amir Bajouri[4**], Siamk Frokh Forghani, [1,2] Amir Saraee[1], Mohammad Taghi Johataei[3], Sepideh Kazemi[4],Rana Irilozadian[2]

1.Department of Plastic and Reconstructive Surgery, Hazrat Fatemeh Hospital, Iran University of Medical Sciences, Tehran, Iran.

2.Burn Research Center, Iran University of Medical Sciences, Tehran, Iran.

3.Institutes of Regenerative Medicine, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences, Tehran, Iran

4.Department of Regenerative Medicine, Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran

Background and Aim: Burn scars remain a serious physical and psychological problem for the affected people. Permanent depigmentation occasionally develops after deep partial-thickness and full-thickness burn injuries, which heal by secondary intention. To date, no standard treatment is available for the post burn hypopigmentation disorder. The goal of this study is to evaluate non-cultured autologous skin cell suspension for repigmentation in hypopigmented burn scar spot.

Methods: In this clinical trial, we enrolled 5 patients with 3 depigmentation sites. We obtained a partial thickness normo-pigmented skin specimen from the patients' thigh junction with an area of one tenth to one third of the recipient site area. The epidermal cell suspension was prepared by processing the autologous skin specimen. To prepare the cell implantation site, fractional Co_2 laser was used in three different formats. In the first mode, Co_2 was used in ablative mode, in the second mode, fractional Co_2 laser was performed with depth 4, and in the third mode, it was performed with fractional Co_2 laser with depth 5, after the laser was done, necrotic tissue were debrided and a bed with dew bleeding was created, and then the cells were cultured in the hypopigmentation sites. An experienced dermatologist and patients respectively defined the repigmentation score and self-assessment score at regular follow-up visits for up to 1 month after treatment.

Results: The mean repigmentation score at 1 month post-transplantation was 28.66%. Result showed a significant existed in the mean repigmentation score after cell transplantation (P=0·000), while there was no significant difference in the different formats of fractional co_2 laser. The number of received cells per cm^2 positively influenced the repigmentation score. Patches located on the face and hand showed significantly higher response to the treatment.
Conclusion: The results of our study demonstrated efficacy of autologous epidermal cell transplantation on repigmentation of depigmented burn scar areas, therefore, it shows promise for the repigmentation of burn scars in post-burn patients.
Keywords: Autologous, cell transplantation, hypopigmentation, burn scar.
* Corresponding author:
Burn Research Center, Iran University of Medical Sciences, Tehran, Iran. E-mail address: soheila_naderi2@yahoo.com
Address: Burn Research Center, Shahid Motahari Hospital, Shahid Yasemi Street, Valiasr Street, Tehran, Iran.

** Corresponding author:
Department of Regenerative Medicine, Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran. E-mail address: bajouri.md@gmail.com .

Morphometric and histopathological evaluation of the effect of umbilical cord blood-mesenchymal stem cells (UCB-MSCs) on grade 2 burn wounds

Milad Ghasemi[1], Nasrin Takzare[2] correspond

1. Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Anatomy, School of Medicine, Tehran University of Medical Science, Tehran, Iran.

Abstract

Introduction: Accelerating wound healing can reduce morbidity and treatment costs and lead to a faster return to work and daily activities. In this study, we intend to evaluate the efficacy of umbilical cord blood mesenchymal stem cells (UCB-MSCs) on burn wound healing.

Methods: This study was performed on 48 adult male Wistar rats. Rats were divided into 4 groups (control, silver sulfadiazine (SSD), intradermal UCB-MSCs, and DMEM groups). Considering ethical principles, second-degree burn wounds were made in the neck of the rats and the histological characteristics of the wounds were compared between the groups on days 7, 10, 14, and 21.

Results: None of the interventions, including UCB-MSCs, had a significant effect on improving the reepithelialization, collagen deposition, wound inflammation, and granulation tissue scores (P.value> 0.05). All three interventions were associated with a significant increase in the wound's fibroblasts and blood vessels and a significant decrease in the number of inflammatory cells compared to the control group (P.Value <0.05), while UCB-MSCs were more effective than other interventions (P.Value <0.05). Finally, all of the interventions were associated with significant acceleration of the wound healing process (P.Value <0.05) while UCB-MSCs were more effective than other interventions so that the percentage of wound healing was higher with UCB-MSCs on all days (P.Value <0.05).

Conclusion: UCB-MSCs improve the histological characteristics of the wound bed for faster repair with a significant acceleration of the wound healing process.

Keywords: Stem cells, umbilical Cord blood, Wound, Burn

Electrospun Polycaprolactone/Chitosan/Jaft biocompatible nanofibers for skin tissue engineering

Alireza Rafati[1], Seyedeh-Sara Hashemi[2], Zohreh Saadatjo[3], Mehrzad Jafari Barmak [4]

1. Division of Pharmacology and Pharmaceutical Chemistry, Sarvestan Branch, Islamic Azad University, Sarvestan, Iran.

2. Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

3. Cellular and Molecular Research Center, Yasuj University of Medical Sciences, Yasuj, Iran.

4. Cellular and Molecular Research Center, Yasuj University of Medical Sciences, Yasuj, Iran.

Background and Aim : Tissue engineering is an emerging method for replacing damaged tissues. In this study, the potential application of electrospun polycaprolactone/chitosan/Oak internal layer (Jaft) as skin scaffolds were investigated. A combination of Polycaprolactone (PCL), chitosan (CH), and Oak internal layer (Jaft) was used to incorporate mechanical properties of synthetic polymers, biological properties of natural polymers, and antibacterial activity of Jaft.

Methods : Physical and morphological characteristics of prepared scaffolds were investigated using scanning electron microscope (SEM), mechanical analysis, swelling ratio, and contact angle. Moreover, chemical and biological properties were evaluated by Fourier-transform infrared spectroscopy (FTIR), chromatography, flow cytometry, DAPI staining, MTT assay, and trypan blue exclusion assay. Obtained results demonstrated that the fabricated scaffolds have good mechanical properties. Moreover, addition of chitosan and Jaft to the PCL scaffolds improved their water absorption capacity as well as surface hydrophilicity.

Results : MTT results showed the fabricated nanofibrous scaffolds have adequate cell viability which is higher than cell culture plate at each time point of culture. Furthermore, SEM images of cultured scaffolds, trypan blue exclusion assay, and DAPI staining confirmed that fibroblast cells could well-attached and proliferate on the PCL/CH/Jaft scaffolds.

Conclusion : Results have proven that this novel bioactive scaffold has promising mechanical properties, suitable biocompatibility in vitro, and in vivo. Consequently, it could be a promising candidate for skin tissue engineering applications.

Keywords : Tissue engineering, Electrospinning, Nanofibrous scaffold, Antibacterial, Wound healing, Skin

In Vivo Evaluation of Electrospun Nanofibrous Scaffold Containing Bentonite nanoparticle on wound healing

Alireza Rafati[1], Seyedeh-Sara Hashemi[2], Ali Akbar Mohammadi [3], Mojtaba Ghaedi [4], Mehdi Kian[5], Behzad Ghafari[6], Zahra Shahhossein[7]

1. Division of Pharmacology and Pharmaceutical Chemistry, Sarvestan Branch, Islamic Azad University, Sarvestan, Iran.
2. Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
3. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
4. Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran
5. Division of Pharmacology and Pharmaceutical Chemistry, Sarvestan Branch, Islamic Azad University, Sarvestan, Iran.
6. Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran
7. Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Bentonite-nanoparticle (Ben-NP) is an inorganic clay material as a antibacterial substance. Ben-NP in mixture with chitosan (CS) shown wound healing properties.

Methods : we fabricated and evaluated an electrospun nanofibrous scaffold containing polycaprolactone (PCL), chitosan, and Ben-NP in order to made a burn wound dressing. Then, the possible effect of the PCL/CS/ Ben-NP scaffold on wound healing was examined in a deep second degree burn wound rat model. The PCL, PCL/CS, and PCL/CS/Ben-NP were characterized by FTIR, mechanical test, swelling, degradation, and scanning electron microscopy (SEM). In addition, human dermal fibroblasts (HDFs) were cultured and cell seeding on the scaffolds and subsequently, cell viability and proliferation were evaluated using MTT assay at 24,48, and 72 hours as well as SEM imaging. Wound healing effect of scaffold were studied by histopathological observations during 3,7, 14, and 21 days in burn rat model.

Results : The evaluation performed by SEM showed that the scaffolds had a three-dimensional, beadles integrated structure. Addition of bentonite to PCL

did not change the tensile strength. All the components maintained their chemical structure while, addition of Ben-NP cause to statistically significant increasing in hydrophilic and antibacterial properties. MTT results shown most Fibroblast cells proliferation on scaffolds in PCL/CS/Ben-NP group, which increased during the time interval. Histopathological evaluation in rat model revealed that the PCL/CS/Ben-NP scaffold was the best, having significantly lower inflammation, higher angiogenesis, the smallest scar width and depth, maximum epitheliogenesis score, and the most optimal modulation of collagen density.

Conclusion : all the electrospun scaffolds used in the present study have beneficial characteristics for applicating in skin tissue engineering but the PCL/chitosan/bentonite-NP scaffold have better regenerative properties to use for skin wound healing.

Keywords : Wound healing, Wound dressing, Chitosan, Polycaprolactone, Bentonite-nanoparticle

معرفی دستگاه پرتابل پوشش ساز نانوالیاف کوآکسیال جهت تولید زخمپوش های سوختگی و محل دونور

Aryan Ranjbar Dastjerd[1], Mojhgan Lotfi[2]

۱. دانشجوی پرستاری؛ محقق و مخترع؛ کمیته تحقیقات دانشجویی، دانشگاه علوم پزشکی تبریز، تبریز، ایران
2. (استاد راهنما)دانشیار گروه داخلی جراحی دانشکده پرستاری تبریز، دانشگاه علوم پزشکی تبریز،مرکز آموزشی درمانی سینا

Background and Aim : پانسمان زخم های سوختگی یکی از موارد چالش برانگیز و قابل بحث در درمان بیماران سوختگی است. از طرفی در مطالعات بر اهمیت کاهش درد بیمار در نتیجه ی کاهش تعداد دفعات تغیر پانسمان تاکید شده است. فناوری الکتروریسی یکی از تکنولوژی های نسبتا جدید می باشد که میتوان از آن برای تهیه زخمپوش های سوختگی و محل دونور استفاده کرد. هدف از این مطالعه معرفی نوعی دستگاه پرتابل تولید زخمپوش با الیاف کوآکسیال(غلاف هسته ای) با کنترل رهایش مواد موثره می باشد که تولید زخم پوش را در لحظه و بر روی سطح زخم انجام می دهد و اخیرا به ثبت رسیده است.
Methods : .نانوالیاف کوآکسیال تولید شده توسط این دستگاه باعث آزاد سازی تدریجی مواد دارویی مد نظر بر روی سطح زخم می شود و از آزاد شدن انفجاری مواد بر روی زخم جلوگیری کرده و از ایجاد سمیت و کاهش عملکرد در نتیجه آزادسازی انفجاری مواد جلوگیری می کند. این روش امکان الکتروریسی همزمان دو نوع پلیمر را ممکن می سازد. الکتروریسی به روش کوآکسیال در این دستگاه امکان الکتروریسی محلول های غیر پلیمری را نیز ممکن کرده است که محدودیت کار با سیالات را کاهش داده و کاربرد این روش را افزایش می دهد.
Results : دستگاه پرتابل پوشش ساز نانوالیاف کوآکسیال با شماره ثبت اختراع 107330 و شماره اظهارنامه 14005001400030091149 به ثبت رسیده است و در مرحله ساخت نمونه اولیه است و پس از بررسی ایمنی و اخذ استاندارد ها و مجوز های لازم، استفاده از آن بر روی نمونه ای حیوانی مورد پژوهش قرار خواهد گرفت.
Conclusion : تا چندی پیش به دلیل بزرگ بودن ابعاد دستگاه های الکترونیکی استفاده از آنها نیازمند اپراتور متخصص و آموزش دیده بود.. از طرفی مددجو از طرف درمانگر در معرض عفونت قرار می گرفت. در سال های اخیر دستگاه هایی معرفی شده اند که هرکدام معایبی از قبیل عدم امکان استفاده از محلول های غیر پلیمری، تک رشته ای بودن، رهایش سریع مواد موثره و .... داشتند که اختراع حاضر در مطالعه اخیر با تولید الیاف کوآکسیال مشکلات فوق را برطرف نموده است.
Keywords : ؛ زخمپوش؛ سوختگی؛ دونور؛ الکتروریسی؛ کوآکسیال؛ نانوالیاف

Role of NPWT as a promising treatment in Older Adult patient with burn: a systematic review

Hamed Savadkoohi[1], mahdi akbarzade amirdehi[2]

1. Student Research Committee.School Of Nursing & Midwifery.shahid Beheshti University Of Medical Sciences.WOC Specialist Nurse.Geriatric Nurse.Tehran.Iran
2. The Head Of Wound & Ostomy Department Of *Baqiyatallah* Hospital.(IIWCC-EWMA-ICW-WOC-ET Nurse).*Tehran.Iran*

Background and Aim : Burns are a major public health problem. The complexity of these wounds makes managing them a challenge, depending on multidisciplinary and specialized work to achieve therapeutic goals. Burn injuries are also a leading cause of mortality and morbidity in low and middle-income countries, with the South-east Asian region accounting for 59% of burns deaths.The main approach to burn treatment is very dependent on the degree of burn injury. It is expected to reduce pain, prevent infection, promote healing, with long-term effects to Minimize scar tissue and contractures . However, several factors can affect the length of treatment such as gender, age, TBSA, depth of the wound, infection/sepsis, location of burns, and inhalation injury. Negative pressure wound therapy (NPWT) is an application of sub-atmospheric pressure that is placed on the wound. Today, the use of NPWT is a new strategy in managing burn injuries. NPWT is a dressing method that has been widely used and has become a standard therapy in several cases of surgical wound treatment. NPWT is considered able to provide an optimal wound healing environment, promote re-epithelialization, reduce edema and bacterial load, and increase dermal perfusion rate.
Methods : In this systematic review and meta-analysis study, four online databases (PubMed, Scopus, web of Science, ProQuest) from related articles from 2017-2022 were searched for related keywords. The quality of articles was evaluated using the Newcastle-Ottawa (NOS) criterion
Results : : This systematic review and meta?analysis study summarised the available evidence on the effects associated with the application of NPWT for burn wounds. Overall, the NPWT groups demonstrated more improvement in graft take rate in the first week and a lower infection rate compared with the other groups.
Conclusion : NPWT is a safe method for accelerating healing and lowering the infection rate of burn wounds. Its use in burn wound treatment is recommended provided it is applied under appropriate circumstances.
Keywords : Burn , NPWT, management , nursing

smart dressing To monitor the temperature and humidity and pH the wound with the ability to send SMS content information of wound to the treatment team and implement telemedicine

Golnaz Zafaripour[1], mohammadreza yazdchi[2]

1. Department of Electrical and Biomedical Engineering, Ragheb Esfahani Higher Education Institute, Isfahan, Iran
2. Department of Biomedical Engineering, Faculty of Engineering, University of Isfahan, Isfahan, Iran

Background and Aim : The skin is the largest and most important organ and the first defense barrier of the body against trauma, burns, etc., for this reason, protecting and treating the skin is important. Choosing the correct treatment method in the face of skin injuries is one of the biggest challenges for treatment personnel. In this article, by controlling the effective parameters of the wound such as temperature, humidity and pH, it has been tried to reduce the consumption of antibiotics, the cost of treatment, and the medicine through to develop far and helps to improve treatment methods and wound healing.

Methods : In the first stage, a transparent, antibacterial, oxygen-permeable and flexible dressing with pH-sensitive microcapsules was prepared using natural polymers compatible with the human body. In the second stage, the designed dressing was equipped with sensors to control temperature, humidity and PH. The new and important achievement of this smart wound dressing is the implementation of remote medicine. It is possible to send the information read from the sensors as an SMS to the treatment staff and activate the alarm for each of the parameters according to the patient's condition. Also, all information can be saved and reported.

Results : . By displaying the effective parameters of temperature, humidity and ph on the device's LCD, the doctor is informed of the condition of the wound at any moment and chooses the best and most effective treatment method. With the addition of SMS and device alarms, the patient needs to be hospitalized. It is reduced in the hospital and the doctor can guide the doctor's treatment remotely. Also, it is possible to diagnose the infection early and prevent the unnecessary use of antibiotics and its problems.

Conclusion : Controlling the influencing factors on the wound and helping the treatment by choosing the best and most effective method by the telemedicine development and treatment staff.

Keywords : smart dressing, wound, Effective treatment ,Telemedicine,

Aloe vera hydrogel loaded by adipose-derived stem cells promote burn wound healing

Ali Akbar Mohammadi[1], Ahmad Oryan[2], Esmat Alemzadeh[3], Ali Moshiri[4], Mitra Zardosht[5]

1. Burn and Wound Healing Research Center, Plastic and Reconstructive Ward, Shiraz University of Medical Sciences, Shiraz, Iran
2. Department of Pathology, School of Veterinary Medicine, Shiraz University, Shiraz, Iran
3. Departments of Biotechnology, School of Veterinary Medicine, Shiraz University, Shiraz, Iran
4. Departments of Surgery and Radiology, Dr. Moshiri Veterinary Clinic, Tehran, Iran
5. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Adipose stem cells (ASCs) are a great promise in wound healing due to their potential in differentiating into various cell lineages and secreting growth factors. The purpose of this study is to evaluate the in vivo effects of Aloe vera hydrogel loaded by allogeneic ASCs on a rat burn wound model.
Methods : The ASCs were isolated, cultured and mixed with 50% Aloe vera hydrogel and injected intradermally around the wound. Demineralized bone matrix (DBM) was used as dressing in the experiment. The burn wound-healing properties of different experimental groups were investigated by histopathological, molecular, scanning electron microscopic and biochemical analysis at the 7th, 14th and 28th days post-wounding.
Results : The Aloe vera and DBM-Aloe vera groups showed almost similar healing properties, while treatment by DBM-Aloe vera/ASCs significantly enhanced wound healing. The levels of transforming growth factor-β1 (TGF-β1) and interleukin-1β markedly decreased at the 7th day post-injury, in the DBM-Aloe vera/ASC-treated group, suggesting that this treatment regime subsided the inflammatory responses. Angiogenesis, re-epithelialization and the level of TGF-β1 in the wounds treated with DBM-Aloe vera/ASCs were also remarkably higher than those of other groups, at the 14th day post-injury.
Conclusion : Besides, scar formation significantly decreased in the DBM-Aloe vera/ASC-treated wounds when compared with other groups. Our biochemical results were in agreement with the molecular and histopathological findings

and strongly demonstrated that a DBM-Aloe vera/ASC composite can stimulate burn wound healing. These results suggest that the DBM-Aloe vera/ASC composite can be considered as a promising therapeutic strategy in the treatment of burn wounds.

Keywords : Adipose stem cell; Aloe vera; Burn wound model; Demineralized bone matrix; Histopathology; Real-time PCR.

Fabrication of cell-laden Collagen Hydrogel bilayer composite loaded with Amniotic membrane extract for Full-thickness Wound Repair

Mohammad Azimialamouty[1], marzie Ebrahimi[2], Hamed daemi[3]

1. Department of Tissue Engineering, School of Advanced Technologies in Medicine, Royan Institute, Tehran, Iran
2. Department of Regenerative Medicine, Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran
3. Department of Tissue Engineering, School of Advanced Technologies in Medicine, Royan Institute, Tehran, Iran

Background and Aim : Tissue engineering composite scaffold is a strategy for tissue regeneration in full-thickness skin wounds. Scaffold architecture and microstructure are designed with a combination of several elements to mimic the biological and physical features of the native extracellular matrix (ECM).
Methods : In this study, we developed a bilayer composite scaffold (BLS) with a microfiber scaffold (EPS) as a top layer with drug-controlled release properties and a stiff cell-laden collagen hydrogel in the bottom layer. Oxidize Alginate (AO) microfiber mat with 0.5% oxidation showed long-term degradation (75.5±2.11%) in vitro (14 days). Oxidize Alginate/keratose (76.69±0.78%) microfiber mat was revealed less cumulative release than AO (85.91±0.98%) alone.
Results : Photo-crosslinking collagen hydrogel (0.2822MPa) has higher mechanical stability than non-crosslinking collagen hydrogel (0.1359MPa) in the presence of acid (64.2±2.11%) and enzyme (88.2 ± 1.81%) degradation. Amniotic membrane extract (AME) released than EPS increased the proliferation and viability of hydrogel-loaded fibroblasts (39.7±2.11ng/matrix). The total protein released volume from BLS was significantly increased than AME-free BLS and FIB-free BLS and was promoted cell migration in the scratch assay($p \leq 0.05$). The BLS containing AME and FIB revealed better regeneration of full-thickness wound in rat after 3 weeks due to the high affinity of the collagen for cell adhesion, tissue integration, and immobilization of the biological factors.
Conclusion : Our results demonstrated the encapsulated fibroblasts were proliferated in the hydrogel matrix in wound in-situ and mimicked dermis skin tissue and AME was facilitated wound re-epithelialization
Keywords : amniotic membrane-full-thickness wound-skin substitute

Intraoperative 3D Bio-Printing: A transformative technology for burn surgery

Alireza Feizkhah[1], Parissa Bagheri Toolaroud[2], Seyyedeh Sahra Mirmasoudi[3], Zahra Pourmohammadi-Bejarpasi[4], Mohammadreza Mobayen[5]

1.2.3.4.5. Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Burn injuries are a major cause of morbidity and mortality among burn patients worldwide. Severe skin burn injuries are challenging to treat due to various problems, including pain, infection, and scars. When a burn damages the skin's extended surface, restoring the skin barrier is critical to avoid sepsis and severe fluid loss. The standard of therapy in this instance is early surgical excision and autologous skin grafting, which is not always practicable owing to a lack of healthy skin and other structural restrictions that enable epidermis restoration but not dermis reconstruction.

Methods : The selection of the studies occurred from the definition of the individual and combined search strategy of the descriptors and keywords. According to the study's objectives, the keywords searched in such sources or databases include Google Scholar, Pubmed, Scopus, Microsoft Academic, Science.gov, BASE, ACM Digital Library, IEEE Xplore, Crossref, and Springer.

Results : Three-dimensional (3D) printing refers to manufacturing techniques that use digital data to create a physical model. Biocompatible materials, cells, and supporting components may now be 3D printed into complex 3D functioning living tissues, thanks to recent advancements in this field of interest. (1) 3D bioprinting has more complications than non-biological printing, such as material selection, cell types, growth and differentiation factors, and technological obstacles relating to the sensitivities of living cells and tissue construction. (2) Intraoperative bioprinting (IOB) or 3D bioprinting directly into wounded regions in a surgical environment is an efficient procedure in which defect information may be quickly acquired and subsequently repaired by bioprinting on a living subject like skin the biggest organ in the human body. Although we expect a promising future of IOB In Burn surgery, It must be acknowledged that we are at the beginning of this technology and the new path that comes with it for treatment. (3)

Conclusion : it seems that IOB can be considered potentially promising for treating burns injury wounds. However, We are at the beginning of the evolution of this technology, and there are various items to consider to obtain the benefits of the IOB and overcome the limitations of routine operations. In this study, we have reviewed this topic.
Keywords : Intraoperative 3D Bio-Printing; Burn surgery; 3D printing; FDM technology

Wharton's Jelly derived Mesenchymal Stem Cells transfected by HIF-1 α promote wound healing in rat model of excision injury

Mohammad Reza Mobayen[1], Zahra Pourmohammadi-Bejarpasi[2], Alireza feizkhah[3], Mehryar Habibi Roudkenar[4], Amaneh Mohammadi Roushandeh[5], Seyyedeh Sahra Mirmasoudi[6]

1.2.3.4.5.6. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Skin as a vital tissue plays an important role in some crucial physiological processes including thermoregulation, vitamin D synthesis, and sensing stimuli. Moreover, the first layer of defense prevent infection, dehydration, and particularly injury to the rest of the body. Skin injuries such as burns and traumatic injuries have high numbers of mortality and morbidity annually and still remain a major clinical challenge. Supporting this notion, the treatment of chronic skin wounds is difficult and largely ineffective. So, Mesenchymal Stem Cells-based therapy has been proposed, at least in part, for addressing the challenge

Methods : : In the current study, we transfected human Wharton's Jelly-derived MSCs (WJ-MSCs) with a pcDNA3.1-HIF1α-3A plasmid that is stable under normoxic conditions and finally examined the efficacy of modified Mesenchymal Stem Cells (HIF1α-MSCs) on the promotion of cutaneous wound healing in rats

Results : The results showed that HIF1α-MSCs significantly promoted wound healing with increased epidermal and dermal regeneration, and enhanced angiogenesis compared with MSCs and Control group

Conclusion : Here, we show that Wharton's Jelly derived Mesenchymal Stem Cells transfected by HIF-1α accelerate wound healing by promoting skin regeneration and angiogenesis, compared with MSCs and Control group

Keywords : hWJ-MSCs, HIF1α, wound healing, excision injury

Combination therapy of inverse agonist of vitamin D receptor (VDR) nanogel and Lipocalin-2 engineered mesenchymal stem cells improve wound healing in rat model of excision injury

Zahra Pourmohammadi Bejarpasi[1], Mohammadreza Mobayen[2], Reza Sabzevari[3], Amaneh Mohammadi Roushandeh[4], Mehryar Habibi Roudkenar[5], Alireza Feizkhah[6]

1. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.
2. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.
3. Department of Medical Biotechnology, Faculty of Paramedicine, Guilan University of Medical Sciences, Rasht, Iran
4. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.
5. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.
6. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.

Background and Aim : Currently, several disorders, including burns, trauma, excisional injury, diabetic wounds, and bedsores threaten the human health. Application of mesenchymal stem cells (MSCs) is recommended for treatment of skin disorders. However, because of oxidative stress and inflammation after skin injury, survival of transplanted MSCs is low, which in turn negatively affects the efficiency of the MSCs-based therapy. In an attempt to address the aforementioned challenge and introducing a novel potential therapeutic strategy, we employed combination therapy by Lipocalin (Lcn2)-engineered MSCs and an inverse agonist of vitamin D receptor (VDR) nanogel in a rat model of the excisional wound.

Methods : First, human Umbilical Cord MSCs (hUC-MSCs) was transfected by a recombinant plasmid encoding the Lipocalin 2 (Lcn2) gene. Next, a combination of an inverse agonist of vitamin D receptor (VDR) nanogel and the engineered MSCs was co-applied on wound in rat model of excision injury. Finally, the im-

provement of wound healing in experimental groups was evaluated by photography and histological assessments (hematoxylin and eosin staining).

Results : Our findings revealed that the repair rate was higher in the group received combination therapy comparing to control groups. Notably, nanogel+Lcn2-MSCs showed significantly higher wound contraction rate compared to control group at all time points (p value< 0.001). Furthermore, wound healing rate was 95%, 14 days after surgery, and 100% after 21 days in the treatment groups. Our results also revealed that the combination therapy improved and accelerated the wound healing process.

Conclusion : Our findings suggest a novel potential therapeutic strategy i.e. Lcn2-engineered MSCs and inverse agonist of vitamin D receptor (VDR) nanogel for wound healing. However, further preclinical and clinical studies are required.

Keywords : Mesenchymal Stem Cells, Inverse agonist VDR, LCN2/NGAL, Wound healing, Excision injury

Hyaluronic acid hydrogel as an effective carrier for adipose-derived stem cells in burn wound healing

Ali Akbar Mohammadi[1], Esmat Alemzadeh [2], Ahmad Oryan [3], Mitra Zardosht[4]

1. Burn and Wound Healing Research Center, Plastic and Reconstructive Ward, Shiraz University of Medical Sciences, Shiraz, Iran
2. Department of Biotechnology, School of Veterinary Medicine, Shiraz University, Shiraz, Iran.
3. Department of Pathology, School of Veterinary Medicine, Shiraz University, Shiraz, Iran.
4. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Application of hydrogels can be an effective technique in transferring the adipose-derived stem cells (ASCs) to injured tissue and their protection from further complications. Besides, acellular dermal matrix (ADM) has successfully been used in treatment of wounds.
Methods : In this study, a combination of hylauronic acid (HA) and ASCs (HA/ASCs) was applied on burn wounds and the injured area was then covered by an ADM dressing in a rat model (ADM-HA/ASCs). Wound healing was evaluated by histopathological, histomorphometrical, molecular, biochemical, and scanning electron microscopy assessments on days 7, 14, and 28 post-wounding.
Results : ADM-HA/ASCs stimulated healing significantly more than the ADM-HA and ADM treated wounds, as it led to reduced inflammation, and improved angiogenesis and enhanced granulation tissue formation. Expression of interleukin-1β (IL-1β) and transforming growth factor-β1 (TGF-β1) was lower in the ADM-HA/ASCs treated wounds than the ADM-HA and ADM groups, at the seventh post-wounding day. ADM-HA/ASCs also enhanced the expression level of TGF-β1 mRNA at 14 day post-wounding that was parallel to the experimental data from histological and biochemical assessments and confirmed the positive role of ASCs in repair of burn wounds.
Conclusion : Additionally, increase in basic fibroblast growth factor (bFGF) expression and decreased TGF-β1 level on the 28th post-wounding day indicated the anti-scarring activity of ASCs. HA loaded by adipose stem cells can represent a promising strategy in accelerating burn wound healing.
Keywords : adipose stem cell; basic fibroblast growth factor; burn wound healing; histology; hyaluronic acid; interleukin-1β; transforming growth factor-β1.

Cervico-mental Angle correction in Burn Scar Contracture with chin augmentation

Mohammadhossein Hesamirostami[1], Leila Sarparast[2], Najibeh Mohseni Moalemkolae[3], Saeedeh najafikersami[4]

1. Department of Plastic & Reconstructive Surgery , Mazandaran University of Medical Sciences, Sari, Iran
2. Clinical Research & Development Unit of Bu-Ali Sina Hospital, Mazandaran University of Medical Sciences, Sari, Iran
3. MSc in Health information technology, Psychiatry and Behavioral Sciences Research Center, Addiction Research Institute, Mazandaran University of Medical Sciences, Sari, Iran
4. MSc in health care management, Psychiatry and Behavioral Sciences Research Center, Addiction Research Institute, Mazandaran University of Medical Sciences, Sari, Iran

Background and Aim : Burn scar contracture of cervico-mental area causes many deformities and disabilities. Limitation, abnormal position and deformity of neck, also retro+_microgenia are the most of them.They have somatic and psychosocial problems. We used sub-mental autologous tissue as fat flap for chin augmentation after excision of hypertrophic scar and releasing scar contracture ., we followed delaying strategy for skin graft

Methods : In a prospective study 7 patients underwent surgical treatment by this method at Zare hospital. All patients signed informed consent. After releasing contracture and excising hypertrophic scar tissues a tri-angle tissue of fat or dermo-fat as a flap based on caudal border of chin was transferred for chin augmentation. We followed delaying strategy for skin graft. Cervico-mental and Legan's angle's of pre-op. and post- op. photos were measured for evaluation of degree of correction by Digimizer software at least 6 month after operation.

Results : Deformities of chin and cervico-mental area due to severe burn scar contracture that needs to wide undermining and changing the coverage or putting a new skin graft to correct the contracture gives an opportunity to the surgeon and the patient to use an easier and non-expensive way for chin augmentation,better cervico-mental and mento-cervical angle by fat or dermo-fat flap.. There are some reports where they used fat or dermo-fat flap from sub-mental

area for chin augmentation. For coverage of released area expanded flap or skin graft could be used. For skin graft due to manipulation and extensive undermining of tissues that have rich lymphatic channels and nodes and fear of lymph drainage and one case of partial skin graft necrosis without any reasonable cause we decided to delay skin graft for 5-6 days

Conclusion : Another reason for the delay in skin grafting is that taking thicker skin requires a better vascular bed. Thicker skin graft resist against recurrence of contracture .

Keywords : Burn Scar, Cervico, Contracture

The relationship between the serum albumin level with burn severity and burn surface before and after primary skin grafting surgery in patients admitted to Imam Khomeini Hospital in Urmia.

Jafar Kazemzadeh[1], Naser Parizad[2], Masoud Safaie[3]

1. Reconstructive and Burn Surgery Department, Urmia University of Medical Sciences, Urmia, Iran. Email: jafarkazemzade48@gmail.com & ORCID ID: https://orcid.org/ 0000-0001-7766-9544
2. Patient Safety Research Center, Clinical Research Institute, Urmia University of Medical Sciences, Urmia, Iran. Email: parizad.n@umsu.ac.ir & ORCID ID: https://orcid.org/0000-0001-7393-3010
3. Reconstructive and Burn Surgery Department, Urmia University of Medical Sciences, Urmia, Iran

Background and Aim : Burns and related injuries are among the most common causes of death in the world. Research has shown that to predict the situation of burnt patients, relying only on physiological and demographic indicators such as burn percentage and age is insufficient, and biochemical markers such as serum albums can also be used. Skin grafting is one of the treatment methods in burn patients which is under the influence of serum albumin level. According to the limited studies and contradictory statistics and the lack of a reliable statistic about albumin levels during surgery in burn patients, and a possible relationship between the albumin level and several factors in surgical patients, especially the possible physiological relationship between the albumin level and the extent and depth of burns. The researchers conducted a study to determine the albumin level before and after primary grafting surgery and its relationship with burn severity and burn surface in the burn patients.

Methods : In this study, 160 hospitalized patients who were candidates for skin graft surgery were assessed in the burn ward of Urmia Imam Khomeini Hospital. The serum albumin was measured before and after surgery, and basic information such as age and sex, the burn severity and burn surface was collected and evaluated based on the study goals using SPSS software version 21.

Results : The mean age of the patients was 39.16±12.68 years (13-65), and 57 % were male. Fire has been the most common cause of burns. The mean serum

albumin level was significantly higher after skin grafting than before surgery. Serum albumin levels in patients with second-degree burns were significantly higher than in patients with grade 3 burns before and after surgery. The serum albumin level also had a significant negative correlation with the burn surface area (p =0.000; r = -0.327) and burn severity (p =0.000; r = -0.493).

Conclusion : Serum albumin levels had a significant relationship with burn severity and burn surface before and after surgery, and similar studies confirm the present study's findings. Therefore, albumin is considered an appropriate indicator in predicting patients' final status and the trauma's intensity.

Keywords : Burns, Albumin, Skin, Tissue Grafts, Surgery

Out comes of conservative managment of deep second-degree burn wounds of the trunk

Mahdi Zanganeh1[1], Abdolkhalegh Keshavarzi[2], Mostafa Dahmardehei1[3], Tayyeb Ghadimi[4], Arvin Abdalkhani[5], Ali Dehghani[6], Zahra Salehi[7], Somayeh Rajabpoor[8], Freshteh Saboohi[9]

1. Burn Research Center, Department of General Surgery, Iran University of Medical Science, Tehran, Iran
2. Burn and Wound Healing Research Center,Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
3. Burn Research Center, Department of General Surgery, Iran University of Medical Science, Tehran, Iran
4. Burn Research Center, Department of General Surgery, Iran University of Medical Science, Tehran, Iran
5. Burn and Wound Healing Research Center,Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
6. Department of Community Health Nursing, School of Nursing, Jahrom University of Medical Sciences, Jahrom, Iran.
7. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
8. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
9. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Burns are among the most common causes of injury and result in long-term morbidity, psychological complications, and reduced quality of life. We aimed to evaluate and compare the results of skin grafting versus nonsurgical treatment in patients with deep second-degree burn wounds of the back and posterior trunk.

Methods : This is a descriptive-analytical cross-sectional study of patients with trunk and buttock burns admitted to Burn Hospital in Shiraz, Iran from 2017 to 2019. The skin surface with burns and the final repaired tissue was measured. The Vancouver Scar Score (VSS) and pigmentation, vascularity, thickness, and

pliability were assessed. VSS, pigmentation, vascularity, thickness and pliability were considered as outcomes

Results : Seventy-five patients met the criteria for participation; thirty-two patients had skin grafts. The mean age was 27.79±20.03 yr and 53 patients (70.7%) were male. Scars were compared based on pigmentation, vascularity, thickness, and pliability, which was also statistically significant. The mean of VSS was higher in patients with skin graft than those without graft

Conclusion : The mean VSS was significantly higher in patients with grade 2 deep burns who received skin grafting than in patients without skin grafting. Due to the lack of donor sites and the need to prioritize skin grafts in burn patients with high total body surface area, it is better to perform skin grafts on the posterior trunk and buttocks in areas with deep grade 2 burns as a last priority and treat this wound with conservative therapy.

Keywords : Skin grafting, Burn, Wounds, Trunk

Post-burn leukoderma: Our early experiences with Miniature punch grafting

Ali Ahmadabadi[1], Hossein Daberi[2], Farnaz Fouladi[3]

1. Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
2. Burns and Reconstructive Surgery Department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
3. Burns and reconstructive surgery department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : Post-burn hypopigmentation especially in cosmetically important areas such as face and hands is an annoying and disfiguring problem for burn patients. In this article we present the results of our early experiences with miniature punch grafting to overcome this challenge.
Methods : Five patients with Post-burn leukoderma with scars more than 20 cm2 were included in this pilot study. Their scars was not appropriate for local excision and other surgical techniques. In all of them under general anesthesia multiple punch excision performed by 2.5 mm sterile and disposable skin punch biopsy device in depigmented areas. Then, pigmented skin was transferred to the site of punch biopsies and was cultured there. Patients were visited for follow-up after 7 days, one month and 6 months.
Results : More than 98% of punch grafts were successful. They started to grow and covering adjacent areas. The cobblestone appearance was the most common problem which disappeared overtime.
Conclusion : Miniature punch grafting seams a very simple and applicable technique to overcome post-burn leukoderma, especially in anatomical areas where the result of surgical techniques is not appealing.
Keywords : Post-burn leukoderma, Miniature punch grafting, hypopigmentation

Management of burn injuries of nipple-areolar complex and breast tissue in prepubescent girls: Case series and review of articles

Ali Ahmadabadi[1], Iman Mehr Ali[2], Zahra Lalavi[3]

1. Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
2. Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
3. Burns and reconstructive surgery department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : Breast tissue is an important unit of chest wall both functionally and esthetically especially in female persons. Involvement of anterior chest wall is very common in severe burns and the prominent position of breast and nipple-areolar complex (NAC), make them vulnerable in any burn injury to anterior chest wall. Appropriate approach to management of these important unit of chest wall is very critical for final result.

Methods : In this case series we present 5 cases of unilateral contracture in anterior chest wall because of the burn injury to breast and NAC. All of them were girls who were injured in prepubescent period. One of them received surgical intervention in thelarche phase and the others after puberty and completion of breast tissue growth.

Results : In one patient who received appropriate surgical intervention in thelarche phase, the breast tissue growth was normal and symmetry of breasts was preserved. In four other cases with delayed surgical intervention, the breast volume in affected site was decreased considerably and symmetry of breasts was unachievable.

Conclusion : Even with nipple loss, the breast bud underneath usually is viable so, growth and development of breast tissue is yet possible. For this reason, conservative management is preferred to surgical excision of burn eschar in acute phase. Early surgical intervention for release of contractures in thelarche phase is important for better long-term results.

Keywords : nipple-areolar complex, breast bud, burns, prepubescent girls

مقالات پوستر

یازدهمین کنگره کشوری سوختگی

تهران، مرکز همایش های بین المللی رازی / ۲۷-۲۸ بهمن ماه ۱۴۰۱

ESR or CRP: which one is a more accurate indicator in burn patients?

Ali Ahmadabadi[1], Zahra Mehrabadi[2], Zahra Lalavi[3]

1. Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
2. Burns and Reconstructive Surgery Department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
3. Burns and reconstructive surgery department, Imam Reza Teaching Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : Major burns are always associated with systemic inflammatory response syndrome, and it is expected that the greater the extent and depth of the burn, the more intense the inflammatory response. In this study, we investigated the relationship between the extent of burns with two common inflammatory indices and the effect of time on this response.
Methods : In 98 acute burn patients who were admitted to the burn department of Imam Reza Hospital, inflammatory factors were measured on different days after the burn. The relationship between the extent of burns and the time between the occurrence of burns and the time of ESR and CRP measurement was investigated.
Results : The average age of the patients was 17.8 ± 18 years. The mean extent of burns of the patients was 26.9 ± 23.8% (2 to 100%). The numerical mean of ESR in the first hour was 40.5 ± 66.3 and the mean of CRP of the patients was 22.7 ± 29.4. While the relationship between the extent of burns and CRP value was not significant, the value of ESR with The extent of the burn had a significant negative relationship, which could be due to the dysfunction of the patient's immune system in severe burns. Also, the ESR value increased rapidly with the passage of time, but no such change was observed in the case of CRP.
Conclusion : It seems that ESR is a better indicator than CRP for evaluating inflammatory response in burn patients, but the precise delineation of its relationship with the severity and extent of burns, as well as the effect of time on these two indicators, requires prospective studies with a larger sample size.
Keywords : Burns, ESR, CRP, systemic inflammatory response

Comparison Between Great Plantain and Silver Sulfadiazine on Wounds Healing

Abdolkhalegh Keshavarzi[1], Hashem Montaseri[2], Rahimeh Akrami[3], saeed Zareie[4], Samereh Moradi[5], Ali Najaf[6], Mostafa Khaleghnia[7], Mohammadali Ahmadi[8], Hamed Shafeipoor[9]

1. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
2. Department of Quality Control, Faculty of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran
3. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
4. 1Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
5. 1Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
6. 1Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
7. 1Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
8. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
9. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Great plantain is a medicinal plant that is available all around the world. The whole plant has several bioactive compounds including terpenoids, flavonoids, phenolic compounds, alkaloids, fatty acids, iridoid glycosides, polysaccharides, and vitamins. Scientific studies have recognized several medical benefits like wound healing, anti-inflammatory, antimicrobial, antiulcerative, and antioxidative agents. The wound-healing capacity of this plant has been investigated under in vivo and ex vivo conditions. In the current study, we aim to compare the therapeutic effect of the P.major extract with 1% sulfadiazine on the healing of second-degree burn wounds

Methods : Second-degree burn victims were included in our study. The investigation and control group, respectively, received P. major ointment 10% and silver sulfadiazine ointment 1%. The bacterial culture from the wound site was taken on days 3, 7, 10, 13, and last day of hospitalization. Patients' subjective

complaints were obtained through the visual analog scale. All patients were treated and evaluated in the hospital.
Results : Among the 15 patients, 11 were male, and the mean age was 33.3 years. The average complete healing duration was 11.73 vs. 13 days in the P. major and control group, respectively. On the third day, infection control was similar between the two groups, and on the seventh day, all bacterial cultures were negative. Although there was a significant reduction in pain scores during the recovery time, no significant differences in pain reduction were noted between the two groups
Conclusion : We showed that P.major ointment is a safe and suitable herbal compound in the treatment of second-degree burn wounds that not only has wound-healing properties but also is an analgesic and antimicrobial compound.
Keywords : Great Plantain, Silver Sulfadiazine

بررسی عدم مصرف انتی بیوتیک بر موربیدیتی و مورتالیتی بیماران بستری در بخش مردان بیمارستان سوانح و سوختگی امیرالمومنین(ع)شیراز ،در طی سال های ۱۴۰۱-۱۳۹۸

Abdolkhalegh Keshavarzi[1], طیب قدیمی[2], زهرا رهگذر[3], علی نجفی[4], محمد ده بزرگی[5], میترا زردشت[6], شقایق فتح پور[7], محمدعلی احمدی[8], مصطفی خالق نیا[9]

۱. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۲. مرکز تحقیقات سوختگی ، دانشگاه علوم پزشکی ایران، تهران، ایران
۳. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۴. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۵. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۶. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۷. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۸. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۹. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع) ، دانشگاه علوم پزشکی شیراز، شیراز، ایران

Background and Aim : در این مقاله ،پژوهش ، به صورت مطالعه - موردی بوده است

Methods : طی یـک دوره ی دوساله در بخـش سـوختگی بیمارسـتان امیر المومنین (ع) دانشگاه علوم پزشکی شیراز،تعداد ۱۳۰ بیمـار ۱۱ تا ۷۴ سـاله کـه دارای سـوختگی درجه دو عمقی و درجه سه ،با درصد های سوختگی از ۲تـا ۴۸درصد که به صورت هدفمند انتخاب شده بودند،مورد مطالعه قرار گرفتند. بیمارانی که از ابتـدای سـوختگی در بخش مردان بستری شده بودند بدون دریافت هیچگونه ،دوز آنتی بیوتیکی وارد مطالعه شدند.

Results : . یافته های پژوهش بدین شرح می باشد»هیچ گونه مرگ و میری در بیماران مذکور گزارش نگردید،هیچ کدام از بیماران به صورت مجدد پس از ترخیص ،در بیمارستان بستری نشدند،از بیماران مورد مطالعه گزارشی از سپسیس و یا انتقال به بخش های ICU ثبت نگردیده است."

Conclusion : در طی مدت بستری بیماران ، نتایج ازمایشگاهی بدین صورت تفسیر شد :"WBC و BUN به صورت معناداری کاهش و PLT به صورت معناداری و در محدوده ی نرمال افزایش داشته است.ازمایش Cr در این بیماران تغییر معناداری نداشت.

Keywords : انتی بیوتیک-سوختگی-موربیدیتی-مورتالیتی

بررسی اپیدمیولوژی کلوئید در بیماران بستری در بیمارستان سوختگی امیرالمومنین شیراز در سال ۱۳۹۷ تا ۱۴۰۰

Abdolkhalegh Keshavarzi[1], Abdolrahman Zarei[2]

1. Burn and Wound Healing Research Center, department of general surgery,
2. Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran

مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران

Background and Aim : کلوئیدها اسکارهای پاتولوژیک هستند که در خارج از ناحیه آسیب دیده رشد می کنند و ممکن است عود کنند. اتیولوژی آنها به طور کامل شناخته نشده است. آنها با علائم فیزیکی درد، خارش و بی حرکتی همراه هستند. بر اسا یک تخمین جهانی حدود ۱۱ میلیون نفر درگیر این مشکل هستند. با این حال، بار جهانی هنوز ناشناخته باقی مانده است.کلوئید می تواند علائم روانی مانند اضطراب ظاهری ایجاد کند که فعالیت های زندگی روزمره و کیفیت زندگی فرد را مختل می کند. به دلیل تأثیرات مهمی که بر روی کیفیت زندگی افراد می گذارد توجه پزشکان را به خود جلب کرده است. این مطالعه با هدف ارزیابی میزان کلوییید به جا مانده در میان بیماران بستری سوختگی در بیمارستان سوانح و سوختگی امیرالمومنین شیراز انجام شد.

Methods : در این مطالعه مقطعی،پرونده بیماران سوختگی بستری شده در بیمارستان سوانح وسوختگی امیرالمومنین شیراز را در طی سال‌های ۱۳۹۷ تا ۱۴۰۰ که در میان آنها برای درمان کلوئید بستری شدند، مورد بررسی قرار گرفت .متغیرهای جنس، سن، محل سوختگی مورد تجزیه و تحلیل قرار گرفت.سپس با استفاده از نرم افزار SPSSورژن ۲۲ و به کمک روش آمار توصیفی داده ها بررسی شد.

Results : از۲۲۲۷ بیمارِ بستری سوختگی که با بهبودی نسبی از بیمارستان مرخص شده اند ،۱۷۱ نفر از آنها برای درمان کلوییید مجدداً در بیمارستان بستری شدند.(۷٪). از این میزان ۹۰نفر مرد ۸۱ نفر زن بودند.میانگین سنی در مردان ۲۴ سال و در زنان ۲۸ سال بود. بیشترین نواحی دارای کلوییید ،درگیری در چند ارگان مختلف (multiple body regions) بود(۳۸٪). در رده دوم اندام های فوقانی(شامل بازو و شانه) قرار داشت.(۲۹٪) .در رده سوم بیشترین مربوط به سر و گردن بود. (۲۲٪).همچنین ۱۱٪ نیز مربوط به درگیری در سایر نقاط بدن بود.

Conclusion : یکی از عوامل مهمی برای افزایش توجه بیشتر به عوارض سوختگی، بروز کلوییید می باشد. . افزایش دانش در این زمینه می تواند کمک شایانی در مواجهه با این عارضه کند.

Keywords : burn,keloid,scar

Suicidal burn among Children in Southern Iran

Aliakbar Mohammadi[1], Reza Shahriarirad [2], Zahra Zardosht[3], Zahra Shahhossein[4], Keivan Ranjbar[5], Amirhossein Erfan[6], Mahboobeh-sadat Modarresi [7], Morvarid Kamali [8], Marzieh Mansouri[9]

1. Burn and Wound Healing Research Center, Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran
2. Thoracic and Vascular Surgery Research Center, Shiraz University of Medical Sciences, Shiraz, Iran/ Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran
3. Burn and Wound Healing Research Center, Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran
4. Burn and Wound Healing Research Center, Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran
5.Thoracic and Vascular Surgery Research Center, Shiraz University of Medical Sciences, Shiraz, Iran/ Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran
6. Thoracic and Vascular Surgery Research Center, Shiraz University of Medical Sciences, Shiraz, Iran/ Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran
7. Burn and Wound Healing Research Center, Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran
8. Burn and Wound Healing Research Center, Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran
9. Burn and Wound Healing Research Center, Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Self-immolation is considered among the most rigorous acts of suicide. Lately, this act has increased in children. This study evaluates the frequency of self-immolation among children in the largest burn referral center in southwest Iran.

Methods : This cross-sectional study was conducted from 2014 to 2018 at a tertiary referral burn and plastic surgery healthcare center in southern Iran. The subjects were pediatric self-immolation burn patients registered as outpatients or inpatients. The patients' parents were contacted regarding any incomplete information

Results : Among 913 children admitted due to burn injuries, 14 (1.55%) were admitted with an impression of suicidal self-immolation. Among the cases of

self-immolation, the ages of the patients ranged from 11 to 15 years (mean: 13.64±1.33), and the average percentage of total body surface area that was burnt in our study was 67.07±31.19. The male-to-female ratio was 1:1, and the majority were from urban areas (57.1%). Also, the most frequent cause of burn injury was fire (92.9%). The mortality percentage was 64.3%. There was no history of family mental illness or suicide among the patients, and only one of the patients had an underlying disease of intellectual disability

Conclusion : The percentage of childhood suicide by burns was alarmingly high among children aged 11 to 15. While contrary to many reports, we reported a high incidence of this phenomenon in males and urban families. Early recognition of risk factors and understanding the intentionality of burns will help medical providers better understand their patients' mental health needs and prevent subsequent self-harm and suicidality.

Keywords : Suicide, Self-immolation, Pediatric, Burn

The effect of drug abuse on clinical outcomes of adult burn patients admitted to a burn center in the north of Iran

Alireza feizkhah[1], Morteza Rahbar Taramsari[2], Negin Letafatkar[3], Mohammadreza mobaye[4], Parissa Bagheri Toolaroud[5], Mojdeh esmailzadeh[6], Sara Hoseinzade[7]

1.2.3.4.5.6.7. Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Burn trauma is a life-threatening event that disproportionately affects low- and middle-income countries and may be accompanied by many risk variables that increase morbidity and death. Substance abuse is one of the lifestyle risks that is increasing globally and can affect burn injury outcomes. This study aimed to evaluate the effect of drug abuse on clinical outcomes of adult burn patients admitted to a burn center in the north of Iran.

Methods : This retrospective study was conducted on adult burn patients referred to Velayat hospital between March 1, 2021, and March 20, 2022. Patients with a history of drug consumption were selected from the hospital information system (HIS) and compared to randomly selected burn victims with no history of drug use. Demographics information, burn etiology, underlying disease, total body surface area, hospitalization duration, and also outcomes were collected and recorded in both groups.

Results : A total of 114 inpatients were included in this study, of which 90 (78.95%) were male. The mean age of the patients was 43 (SD=15). The mean hospitalization duration was significantly higher in the drug abuse groups group than in the Non-drug abuse groups (P=0.004). Underlying disease (P-value=0.021), Inhalation injury (P=0.000), mortality (P=0.002), and pneumonia (P-value=0.000) were significantly higher in the drug abuse groups group. However, the Infection and Sirs rate had no statistically significant differences between the groups (P=0.583).

Conclusion : Substance abuse is a risk factor in adult burn patients, affecting the length of stay and burn-related morbidities.

Keywords : drug abuse ; burn patients ; clinical outcomes

پانسمان ساده با پودر ترمیم زخم آسا فارما بر افزایش بافت گرانوله در بیماران پس از دبرید بافت سوخته و زخم های فشاری

Alireza Moeini[1], مسعود شهرستانی[2], نیلوفر حاجی بیگ[3], مانیا صالحی[4]

کارشناس ارشد پرستاری سالمندی/بیمارستان امام موسی کاظم(ع)/اصفهان/ایران
کارشناس ارشد مهندسی صنایع/شرکت دانش بنیان آسادارویپویش/شهرک علمی تحقیقات اصفهان/ایران
کارشناس پرستاری/بیمارستان امام موسی کاظم(ع)/اصفهان/ایران
کارشناس پرستاری/بیمارستان امام موسی کاظم(ع)/اصفهان/ایران

Background and Aim : سوختگی چهارمین تروما شایع در سراسر جهان است و سالانه افرادی زیادی دوچار حادثه میشوند، زخم فشاری یک تشخیص و نیاز به مراقبت پزشکی و پرستاری دارد، زخم فشاری علاوه بر به تعویق انداختن بهبودی هزینه های زیادی را به فرد تحمیل میکند.از مهم ترین اقدامات جهت این افراد استفاده از روش هایی جهت سرعت دادن به روند درمان و استفاده از پانسمان های اقتصادی تر جهت درمان این بیماران است

Methods : : این کارآزمایی در شهر اصفهان تعداد ۴۷ نفر بیمار که ۱۷ نفر دوچار سوختگی درجه دو و سه با سوختگی کمتر از ده درصد بدن و ۳۰ نفر زخم بستر را که زخم ها دبرید شده و دارای حفره زخمی میباشند. این افراد به ورش تصادفی در دو گروه تقسیم شده اند و گروه اول شامل ۸ نفر سوختگی و ۱۵ نفر زخم بستر با ورش های سنتی و معمول پانسمان شده اند و گروه دوم متشکل از ۹ نفر سوختگی و ۱۵ نفر زخم بستر با پودر ترمیم زخم آسا فارما پانسمان انجام شد. مدت زمان درمان و میزان ترمیم توسط چک لیست مورد ارزیابی تکمیل شد و داده ها توسط نرم افزار SPSS مورد تجزیه و تحلیل قرار گرفت و آزمون های آماری کای اسکولار، تی مستقل و.. انجام شد

Results : طول ترمیم در گروه سنتی ۶±۳۵ روز و در گروه ترمیم با پودر آسافارما ۶±۲۷روز میباشد که اختلاف معناداری در دو گروه مشاده میشود.

Conclusion : با توجه به طولانی بودن و عوارض روش های سنتی پانسمان و تاخیر در بهبود ، پودر آسافارما میتواند جایگزین مناسبی جهت تریمیم زخم های سوختگی درجه دو و سه و همچنین پرکردن حفره زخم های فشاری باشد

Keywords : زخم ، دبریدمان، زخم بستر، سوختگی

Effect of Epidermal Growth Factor-Loaded Acellular Dermal Matrix in skin regeneration

Alireza Rafati[1], Seyedeh-Sara Hashemi [2], Abdolkhalegh Keshavarzi[3], Parisa Sanati [4]

1. Division of Pharmacology and Pharmaceutical Chemistry, Sarvestan Branch, Islamic Azad University, Sarvestan, Iran.
2. Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
3. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
4. Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

Background and Aim : Tissue engineering, as a novel approach in dermatology, fulfills a pivotal role in enhancing and accelerating wound healing. In the present study, we synthesized acellular dermal matrix (ADM) and assessed the effect of human epidermal growth factor (EGF) on the proliferation and migration of fibroblast cells seeded in the ADM.We developed ADM from fresh full-thickness human skin. Subsequently, its morphology ,tensile strength were characterized. Foreskin fibroblast cells were isolated, cultured and characterized. The fibroblast cells were sowed in the ADM in two groups including with and without EGF.

Methods : We assessed the adhesion and proliferation of the cells on the scaffold by SEM, MTT, and DAPI staining. For animal studying, the 32 rats were randomly divided into two equal groups (ADM, ADM+EGF). Wound healing was assessed macroscopically, histologically and by real-time PCR for Bax and Bcl-2 gene expression during the time interval.

Results : The ADM characterization results showed that the scaffold was dense and integral with good stretching. The isolated fibroblast cells morphology and phenotype confirmed the identity of these cells. The fibroblast cells cultured on the ADM showed proliferation, which improved by the addition of EGF. In animal models EGF addition caused significantly improved wound healing compared with isolated ADM; it also resulted in increased Bcl-2 expression and decreased Bax expression.

Conclusion : ADM provides an appropriate bed for the growth of fibroblasts, and the addition of EGF leads to increased fibroblast propagation and migration. Application of ADM with EGFs could represent a novel therapeutic methodology for treating burns and chronic wounds.

Keywords : Acellular Dermal Matrix, Epidermal Growth Factor, Skin Regeneration, Fibroblast Cells

The Frequency of type III secretion system associated exoenzyme virulence factors Among Clinical Isolates of Pseudomonas aeruginosa in burn patients

Amir Emami[1], Neda Pirbonyeh[2], Fatemeh Javanmardi[3], Mitra Zadosht[4], Marziyeh Mansouri[5]

1. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Department of Biostatistics, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran
4. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
5. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.

Background and Aim : Pseudomonas aeruginosa as an opportunistic pathogen produces several virulence factors. The most important of these factors is exotoxin and type III secretion system (T3SS). The present study aimed to determine the prevalence of virulence factors and antimicrobial resistance profile of Pseudomonas aeruginosa strains isolated from burn patients.

Methods : In this cross-sectional study, 75 P. aeruginosa isolates were recovered from burn wound samples. Susceptibility antibiotics testing was performed by the disc diffusion method according to CLSI guidelines. The presence of virulence genes was determined by the PCR method.

Results : Overall, the frequency of toxA, exoU and exoS genes were 80.9%, 53.2%, and 50.7%, respectively. The frequency of exoS+/exoU- and exoS-/exoU+ genotypes was estimated 16.8% and 17.2%, respectively. Indeed, genotypes exoS+/exoU+ were found with frequencies of 48.7%. The highest and lowest antibiotic resistance rate was seen against colistin (94.2%). Fluoroqinolone-resistant isolates were isolated with frequency of 42.2%. Multi-drug resistant (MDR) isolates were detected in 57.4% of isolates.

Conclusion : This study established a correlation between T3SS proteins, particularly exoS and exoU genes and antimicrobial resistance in P. aeruginosa isolates from burn infection. the presence of the specific virulence genes can be a predictive marker for the persistence of these isolates in the hospitals and subsequently a worse clinical condition for the affected patients.

Keywords : Pseudomonas aeruginosa, exotoxin A, exoenzyme S, exoenzyme U

novel mineral-based bleeding control agent consisting of a combination of bentonite and kaolinite with natural materials

Amir Emami[1], somayeh mohebbi [2], mohammad sabori [3], mohammad mohebbi[4], neda pirbonyeh[5]

1. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of cardiology, echocardiography fellowship, Rajaee cardiovascular center, Iran university of medical scince, Tehran, Iran
3. Department of pathology, cytopathology fellowship, Shiraz university of medical scince, Shiraz, Iran
4. Managing Director of Pars Gostaran Modern Science Development Company, Abadeh, Iran.
5. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.

Background and Aim : Haemorrhage remains the greatest threat to of life on the battlefield, accounting for half of all deaths. Either in burn patients, blood loss during soft tissue excisions is a life threat for this group of victims. Over the past decade, the US army has widely studied new technologies for stopping haemorrhages and has introduced an effective zeolite-based haemostatic agent. In this study, the bio-stimulatory effect of Gelatin, kaolin, eggshell and calcium, cellulose oxide, chitosan, collagen and albumin as well as two minerals; bentonite and kaolinite with nanoparticles are presented.

Methods : In this experimental study, 10 blood donors were selected randomly. 20 cc of blood was taken from each donor and divided into 10 tubes. One tube from each blood donor was considered as a control. To other tubes conical of Gelatin, kaolin, eggshell and calcium, cellulose oxide, chitosan, collagen and albumin, bentonite, and zeolite with nanoparticles added with different percentages. The bleeding time (BT) and clotting time (CT) were also measured using a chronometer. Analysis of variance (ANOVA) was used for comparing the means of each parameter in the case.

Results : The volume of clotting time in the controls were 359±52.1 seconds in the blood donor were treated with a (Bentonite/kaplinite/gelatin/eggsheel/Starch), (Bentonite/gelatin/eggshell), (Bentonite /eggshell) the clotting time were 68±15.7, 74±13.5, 96±9.2 sec, respectively.

Conclusion : To our knowledge, this is the 1st study to investigate the alterations

of clotting time following the use of Natural materials as well as bentonite or the mixture of bentonite-zeolite minerals. The results obtained in this study clearly show the significant alterations in the clotting time following the topical use of the mixture of bentonite-kaolinite minerals with Gelatin, kaolin, eggshell and calcium.

Keywords : Clotting Time, Natural materials, Bentonite, Kaolinite

بررسی شیوع عفونت در بیماران سوختگی در ایران(مقاله مروری)

Amir keyvan Marofi[1], سعیده نجفی کرسامی[2], نجیبه محسنی معلم کلائی[3], نادیا معروفی[4]

۱. متخصص بیماری های عفونی و گرمسیری، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد ، مرکز روانپزشکی و سوختگی زارع ، دانشگاه علوم پزشکی مازندران، ساری، ایران
۲. کارشناسی ارشد مدیریت خدمات بهداشتی و درمانی، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد، مرکز روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران، ساری، ایران
۳-۱. کارشناس ارشد فناوری اطلاعات سلامت، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد ، مرکز روانپزشکی و سوختگی زارع ، دانشگاه علوم پزشکی مازندران، ساری، ایران
۴. دانشجوی میکروبیولوژی، دانشکده کشاورزی، دانشگاه آزاد اسلامی، قائم شهر، ایران.

Background and Aim : سوختگی، نوعی‌آسیب به بافت‌های بدن است که در اثر تماس با منابع حرارتی ایجاد می شود. علی رغم پیشرفت های پزشکی و امکانات مراقبت ویژه جهت بیماران سوختگی، هنوز عامل اصلی مرگ و میر در این بیماران عفونت می باشد. هدف از انجام این مطالعه بررسی شیوع عفونت در بیماران سوختگی در ایران می باشد.

Methods : مطالعه حاضر از نوع مروری است که با استفاده از پایگاه های اطلاعاتی ISI, Pubmed و Sci-ence Direct و منابع فارسیIranmedex, SID و Magiran انجام شده است. جستجو در این پایگاه ها با استفاده از کلمات کلیدی بیماران سوختگی (Burn patient)، عفونت زخم (burn wound infection) ، عفونت ادراری (UTI)، عفونت خونی (blood infection)، عفونت ریه (Lung infections) انجام شد. از بین مطالعاتی که طی سال های ۱۳۹۰ تا ۱۴۰۰ منتشر شده بود، ۴۵ مقاله استخراج شده است. درنهایت ۲۵ مقاله در راستای اهداف پژوهشگران مورد بررسی قرار گرفت.

Results : از بین رفتن پوست، کاهش خونرسانی به بافت سوخته، تعدد و تکرار روش های مختلف درمانی، اقامت طولانی مدت بیمار در بیمارستان، راهکارهای درمانی تهاجمی مانند کاتترهای ادراری، کاتترهای عروقی، لوله تراشه و تضعیف سیستم ایمنی در سوختگی های وسیع از مهمترین علل عفونت در سوختگی ها می باشند. مطالعات متعددی در کشورمان انجام شده است. در مطالعه ای که در سال ۹۵ انجام شد، از مجموع ۱۵۵ بیمار دچار سوختگی، ۳۸ بیمار (۲۴/۶ ٪) عفونت بیمارستانی داشتند. کشت ها ی مثبت باکتری شامل عفونت زخم ۲۶ بیمار (۱۶/۸ ٪)، عفونت ادرار ۱۰ بیمار (۵/۶ ٪) و عفونت خونی ۲ بیمار (۱/۳ ٪) بود. در مطالعه ای که در سال ۹۲ انجام شد از مجموع ۱۰۰ بیمار، ۶۱۵ نمونه کشت زخم، خون، ادرار، لوله تراشه و کشت بیوپسی بافت گرفته شد، که ۲۶۶ مورد مثبت بودند. در مطالعه ای در سال ۹۴ انجام شد، میزان عفونت زخم ناشی از آسینتوباکتربومانی ۲۵/۵ ٪ بود.

Conclusion : مهمترین عامل موفقیت در درمان و کاهش مرگ و میر بیماران سوختگی کنترل عفونت می باشد. بکارگیری استراتژی دقیق جهت کنترل عفونت در بخش سوختگی ضروری می باشد. از جمله راهکارهای مناسب برای کنترل عفونت در بیماران سوختگی تشخیص سریع باکتری های ایجاد کننده عفونت به منظور تجویز آنتی بیوتیک می باشد.

Keywords : سوختگی، عفونت، پنومونی

copper(II)-chitosan complexes as antibiotic-free antibacterial agent on wounds

Arash Mahvashi[1]

1. PhD in microbiology

Background and Aim : Bacterial resistance to antimicrobial agents, especially antibiotics, is a challenge that has been recently recognized and addressed by the authorities all over the world as an emerging threat to humanity. The excessive use of antibacterial agents is causing a high impact on environment and all existing life mainly human being health. There is a worldwide trend to explore new alternatives that control postharvest pathogenic diseases, giving priority to methods that reduce disease incidence and avoid negative and side effects on human health

Methods : copper(II)-chitosan complexes

Results : Recent investigations showed that low molecular weight chitosan exhibited strong bactericidal activities compared to chitosan with high molecular weight. The chitosan on the surface of the cell can from a polymer membrane, which prevents nutrients from entering the cell. Chitosan of lower molecular weight diffuses into the cell through pervasion. Sine chitosan could adsorb the electronegative substance in the cell and flocculate them, it disturbs the normal physiological activities of the bacteria and kills them. It can be observed that the antibacterial activities of Chitosan-Cu (II) complexes are enhanced with increasing chelate ratios. Ideal-inhibiting effects could be obtained when the chelate ratios of complexes were about 1:1. More works are needed to confirm this conclusion

Conclusion : Since chitosan degradation can be caused by the coordinating bond, we attempt to synthesize and characterize the chitosan-Cu (II) complex, and thereafter study the coordinating bond effect on its antibacterial activity against Salmonella enteritidis. Seven chitosan–copper complexes with different copper contents were prepared and characterized by FT-IR, UV-vis, XRD and atomic absorption spectrophotometry (AAS). Results indicated that for chitosan-Cu (II) complexes with molar ratio close to 1:1, the inhibition rate reached 100%.

Keywords : copper(II)-chitosan, antibiotic-free, antibacterial, wounds

Evaluation of burn outcome in patients admitted to the intensive care unit of velayat hospital based on Apache II scoring

Daniel Rahimi Nejt[1], Sheyda Rimaz[2], Siamak Rimaz[3]

1. Student Research Committee, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
2. Student Research Committee, School of Medicine, Anzali International Campus, Guilan University of Medical Sciences, Rasht, Iran
3. Siamak RimazBurn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : The burden of burns in Iran ranks high among trauma-related diseases, so it would be important to determine the predictive power of burn criteria and chronic health status in mortality caused by burns in burns intensive care units. In the present study, we aim to investigate the role of Apache II chronic health score and the factors influencing patient mortality in the burns intensive care unit at Velayat Hospital, Rasht, over 2017-2021.
Methods : Research participants included all patients admitted to the intensive care unit at Velayat Hospital, Rasht, over 2017-2021 with a burning diagnosis of over 20% and over the age of 18 years old who met the inclusion criteria. Patient records were obtained from the HIS department of the burns intensive care unit at Velayat academic medical center, Rasht, and recorded in a researcher-made checklist. A significance level of 5% was considered for all research hypotheses, and SPSS v.24 software was used for the statistical analyses.
Results : This study included 333 patients, 75.4% men with mean age of 47.33± 18.40 years and 24.6% women with mean age of 47.33± 18.40 years. On the Apache II score sheet, 72 patients (21.6%) scored 0-15, 80 patients (24%), 16-19, 95 patients (28.5%), 20-30, and 86 patients (25.8%), over 30. According to the results, mean Apache II scale scores were significantly different at the 5% significance level, with higher scores associated with the deceased group (P-value=0.000). Results also indicate that patients with higher burn percentage (P-value=0.000), respiratory injury (P-value=0.013) and burn degree (P-value=0.000) were significantly more prone to the risk of death. Results also revealed that gender and burn location had no significant relationship with the situation at discharge at the 5% significance level.
Conclusion : Results of the present study revealed that the Apache II system had

the efficiency required to predict the risk of mortality in patients admitted to intensive care unit of Velayat hospital, Rasht, due to burns. Our results also indicated that patients with a higher burn percentage and burn degree and respiratory injury were at a higher risk of mortality.
Keywords : Apache II, Trauma Severity Index, Burn, Mortality

مروری بر مدیریت درد در سوختگی کودکان

Davood Sayadi[۱], سعیده نجفی کرسامی[۲], محمد حسین حسامی رستمی[۳], نجیبه محسنی معلم کلائی[۴], عذرا احمدی سرخکلائی[۵]

۱. متخصص اطفال، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد ، مرکز روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران، ساری، ایران
۲. کارشناسی ارشد مدیریت خدمات بهداشتی و درمانی، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد، مرکز روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران، ساری، ایران
۳. فوق تخصص جراحی پلاستیک و زیبایی، واحد توسعه تحقیقات بالینی، مرکز روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران ، ساری، ایران
۴. -۱ کارشناس ارشد فناوری اطلاعات سلامت، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد ، مرکز روانپزشکی و سوختگی زارع ، دانشگاه علوم پزشکی مازندران، ساری، ایران
۵. کارشناس پرستاری، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد، مرکز روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران، ساری، ایران

Background and Aim : سوختگی یکی از رایجترین آسیب ها، مخصوصاً در سنین کودکی است. از شایع ترین آسیب که در خانه یا محیط کاری اتفاق می¬افتد. سوختگی دوران کودکی یک تجربه دردناک است. مدیریت مناسب درد برای کودکانی که آسیب سوختگی را تجربه کرده اند، برای بهبود نتایج حیاتی است. هدف از انجام این مطالعه، مروری بر مدیریت درد در سوختگی کودکان می باشد.

Methods : مطالعه حاضر از نوع مروری است که با استفاده از پایگاه های اطلاعاتی ISI, Pubmed و Science Direct و منابع فارسیIranmedex, SID و Magiran انجام شده است. جستجو در این پایگاه ها با استفاده از کلمات کلیدی سوختگی (Burn)، سوختگی کودکان(Pediatric burn)، کنترل درد (Pain management)، واقعیت مجازی (Virtu al reality) و هیپنوزیس (hypnosis) انجام شد. محدوده سنی زیر ۱۸ سال مد نظر بوده است. از بین مطالعاتی که طی سال های ۲۰۱۲ تا ۲۰۲۲ منتشر شده بود، ۵۰ مقاله استخراج شده است که درنهایت ۲۰ مقاله در راستای اهداف پژوهشگران مورد استفاده قرار گرفت

Results : سوختگی ها و روش های مراقبت از زخم برای کودکان بسیار دردناک و اضطراب آور می باشد. روش معمول کنترل درد در بیماران سوختگی استفاده از ضد درد مخدر به همراه داروهای ضد اضطراب و بی حسی است. به علاوه مصرف داروهای کاهنده درد عوارضی مانند سرکوب تنفسی، خواب آلودگی، تهوع، استفراغ و یبوست به همراه دارد. مداخله غیردارویی مانند: تکنیک‌ها و وسایل حواس‌پرتی و انحراف فکری، انحراف شنیداری و انواع بازی های ذهنی در سوختگی کودکان سودمند هستند. فناوری های جدید مانند واقعیت مجازی، از طریق ادغام روش‌های بینایی و شنوایی فراگیر، رویکردی نوآورانه برای مدیریت درد ارائه می‌دهد. این رویکرد با تغییر ادراک درد منجر به کاهش درد و افزایش عملکرد در کودکان سوخته می شود.

Conclusion : مدیریت درد در کاهش درد و اضطراب در کودکان سوخته بسیار مهم است.کاهش درد در طی مراحل مراقبت از زخم سوختگی، در میزان بهبود زخم مرتبط است. بکارگیری تکنیک‌هایی نوین، مداخلات غیر دارویی و غیر تهاجمی، عوارض جانبی ندارند و در عین حال آسایش و رضایت بیمار را حفظ می‌کنند، که هر چقدر اثرات روش های متفاوت برای کنترل درد بیشتر باشد اثرات مخرب روانی درازمدت کمتر و همکاری کودک بیشتر خواهد شد.

Keywords : سوختگی، کودکان، کنترل درد

Evaluation of silver sulfadiazine 1%-cerium nitrate 2.2% cream efficacy and safety in moderate to severe burn patients: a single-blind randomized clinical trial

Emad Molaei[1], Sepideh Elyasi[2], Ali Ahmadabadi[3]

Assistant of Clinical Pharmacy, Tehran University of Medical Sciences
Department of Clinical Pharmacy, School of Pharmacy, Mashhad University of Medical Sciences,
Surgical Oncology Research Center, Mashhad University of Medical Sciences

Background and Aim : Burn injuries are one of the most devastating injuries and a major global health crisis. Topical antimicrobials such as silver sulfadiazine (SSD) are commonly used for superficial burn wounds. SSD has broad-spectrum antimicrobial and anti-inflammatory activity, but also suffers from some limitations. Therefore, some studies suggest to add cerium nitrate (CN) to SSD, as an immunomodulatory and tanning agent with antitoxic properties, but its clinical efficacy on mortality, length of hospital stay, and bacterial colonization is contraversial. So, in this research, we evaluated the efficacy and safety of SSD 1%+CN 2.2% cream in patients with moderate to severe burn.

Methods : Twenty-two patients who fulfilled the inclusion criteria randomly assigned to the intervention (n=7) or control (n=15) group and received SSD 1%+CN 2.2% or SSD cream 1% once daily until the complete re-epithelization or prepration of the burned skin for grafting. Pain scores, re-epithelialization time, required interventions, laboratory and clinical findings and final outcome were recorded.

Results : There was no significant difference in re-epithelialization time between treatment and control groups (p>0.05). The same findings were found about required interventions and laboratory and clinical parameters. However, the final outcome and the pain score on third day were significantly better in the treatment group (P=0.017). On the other hand, all patients in the treatment group needed graft surgery.

Conclusion : Use of SSD1%+CN2.2% cream did not significantly improve re-epithelization time, or reduce infection occurrence and patients' pain, but also may increase graft surgery rate in comparison with SDD1% cream.

Keywords : Silver sulfadiazine; Cerium nitrate; Flammacerium; moderate-severe burns

Investigating burn wound infections in patients hospitalized in the burn departments of Imam Musa Kazem University Hospital in Isfahan and determining the resistance pattern of isolated bacteria

Fateme Hadadisohi[1], Ehsan Radi[2], Fateme Jafari[3], sima yadegari[4]

Infection control expert in the burn department of Imam Musa Kazem Hospital esfahan
PhD in microbiology
Nursing manager
Infectious disease specialist

Background and Aim : Burn infections as a hospital infection are an important factor in the death of patients and disabilities after burns. Since knowledge of the common bacteria that cause infection and their resistance pattern plays an important role in the prevention and rapid treatment of burn infections, this study aims to investigate burn wound infections in the burn department of Imam Musa Kazem Hospital in Isfahan city and determine the resistance pattern. The isolated bacteria were designed and implemented in relation to antibiotics.
Methods : In this study, 326 samples were taken from 287 patients hospitalized in the burn department of Imam Musa Kazem Hospital and after identifying the types of bacteria in the samples, the sensitivity of these bacteria to 9 antibiotics used in the burn departments using It was investigated by Agar diffusion method.
Results : Out of 326 examined culture samples, 232 recorded culture cases were extracted. Of the positive cultures, 51.6% of samples were related to male patients and 48.4% were related to female patients. The most antibiotics used in antibiogram were imipenem 95.3% of cases and ceftazidime with 87.1% of cases, and the rate of bacterial resistance to them was 66% and 69.2%, respectively. The positivity of culture and antibiotic resistance did not have a statistically significant relationship with the patient's gender and the way of referral.
Conclusion : The results of this study show an increase in the resistance of bacteria to common antibiotics, which may be the reason for the excessive use of antibiotics, which is recommended to avoid the use of antibiotics without justification as much as possible and to produce newer generations. And effective antibiotics that are affordable at the same time should be considered.
Keywords : Bacterial infection,Burn units,Antibiotic resistance

Mutation in QRDR (quinolone resistance determining region) among ciprofloxacin-resistant and susceptible Pseudomonas aeroginosa strains isolated from burns of hospitalized patients in Guilan

Fatemeh Akhlaghi[1], Iraj Nikokar[2], Ali Mojtahedi[3], Mohammadreza Mobayen[4], moslem karampoor[5]

Microbiology Departmen،Faculty of Medicine،Guilan University campus،۷th Km of Rasht-Tehran Highway،Rasht-Tehran
Paramedicine Faculty، Laboratory of Microbiology and Immunology of Infectious Diseases، Guilan
Associate Professor of Microbiology School of Medicine Cellular and Molecular Research Center Guilan University of Medical Sciences
Fellowship in plastic and burn reconstructive surgery Guilan University of Medical Sciences
Department of Microbiology، School of Medicine، Guilan University of Medical Sciences، Rasht، Iran

Background and Aim : The incidence of resistant to fluoroquinolones among P. aeruginosa isolates is increasing, particularly in patients with burn wound infection and mainly due to mutations in the genes of the quinolone resistance determining region (QRDR).In this study, we evaluated the antibiotic resistance pattern and mutations in QRDR among ciprofloxacin-resistant and susceptible P. aeruginosa strains isolated from patients with burn wounds.

Methods : 300 samples were collected from patients with burn wound infections in Guilan, Iran. P. aeruginosa was identified by standard bacteriological methods and drug susceptibility tests were carried out using the agar disk diffusion method in accordance with CLSI creature. DNA extraction and PCR analysis were performed for the amplification and sequencing of gyrA, gyrB, parC, and parE genes in QRDR.

Results : A total of 118 (39.8%) strains of P.aeruginosa were isolated from the samples of patients with burn wound infection. Resistance to tobramycin, gentamicin, piperacillin, ciprofloxacin, ceftazidim and amikacin was observed in (59/32%), (55.08%), (51/69%), (50/84%), (30.50%) and (26.27%) of isolates, respectively. The most effective antibiotic was imipenem, with a resistance rate of 25.42%, and 42 (35.59%) of isolates were multi-drug- resistant (MDR). The results of sequencing in the QRDR region indicate that the most mutations were in the gyrA gene and 85.71% of mutations were the change of threonine to isoleucine (Thr-83 Ile) in the ciprofloxacin resistant strains. In the two ciprofloxacin-sensi-

tive strains, silent mutations in the gyrA gene were reported. However, one unusual amino acid substitution at codon 470 of the ParE gen (Asp replaced by Asn) was exhibited in a ciprofloxacin-resistant strain. No mutation was observed in the gyrB and ParC genes.

Conclusion : Mutations in the QRDR region can play an important role in resistance to quinolones, especially Ciprofloxacin. In this study, the most mutations were observed in the gyrA gene and codon 83. This mutation converts the polar amino acid threonine to the non-polar amino acid isoleucine, which may be the main mechanism of resistance to Ciprofloxacin.

Keywords : antibiotic resistance, ciptofloxacin, QRDR mutation, pseudomonas aeruginosa.

Effect of virtual training on social function of quality of life in burn patients in Shahid Motahhari Hospital, Tehran

FATEMEH MOHADDES ARDEBILI[1]

1. Faculty member Nursing and Midwifery, Iran University of Medical Sciences,

Background and Aim : Burn is a tissue injury and affects social functioning and lead to disruption of social dysfunction. The aim study was determine, Effect of virtual discharge training on social functioning of burn patients.

Methods : This study was an experimental clinical trial with a control group and was performed on 100 burned patient. Sampling was done in a continuous way and samples were randomly entered into the study. 50 were in the intervention group and 50 in the control group. The control group received only common education, and the intervention group received a multi-media self-care discharge training on a CD in addition to the common education. Data were gathered by demographic information BHS-BS Quality of Life Questionnaire. Social function of quality of life was examined in both groups before intervention, 3 months and 6 months after intervention. The data, analyzed descriptive and analytic tests, chi-square, fisher exact, Mann-Whitney nonparametric tests, Friedman, Dunn test, Spearman correlation coefficient were used in SPSS 21 software and significance level was considered 0.05.

Results : Results showed. before intervention the mean score of social function of quality of life in intervention and control group was 1/55± 0/46, 1/92± 0/6 respectively which was statistically significant (p <0.001). Mean and standard deviation of social function of quality of life in the intervention and control groups three and six months after intervention were2/47± 0/56, 4/05± 0/77, 2/15±0/39, 3/29 ± 0/95 respectively which was statistically significant (p <0.001).

Conclusion : Virtual discharge training was effective in improving the social functioning of burn patients. Recommended to use this method to improve Social function patients.

Keywords : Social function, burn patients, virtual discharge training,

بررسی سوختگی در دوران بارداری

[۱]Fatemeh Sahampour, عبدالخالق کشاورزی[۲], فاطمه سهامپور[۳], عبدالرحمان زارعی[۴]

۲. مرکز تحقیقات سوختگی و ترمیم زخم، گروه جراحی، بیمارستان امیرالمومنین (ع)، دانشکده پزشکی، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۳. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۴. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران

Background and Aim : سوختگی در دوران بارداری می‌تواند پیامدهای ناگواری داشته و حیات مادر و جنین را به مخاطره بیاندازد. مطالعه حاضر با هدف بررسی بروز سوختگی در دوران بارداری و پیامدهای آن و بررسی میزان مراقبت از مادران باردار انجام شد

Methods : مطالعه توصیفی- مقطعی و گذشته نگر بر روی همه خانمهای سن باروری (۱۵ تا ۴۹ سال) دچار سوختگی که در بیمارستان امیرالمومنین شیراز از اول فروردین سال ۱۳۹۴ تا پایان اسفند سال ۱۴۰۰ بستری شده اند صورت گرفته است.داده ها از پرونده بیماران گردآوری و با روش های آمار توصیفی و نرم افزار SPSS بررسی گردیده است .

Results : از ۷۴۰ خانم متأهل دچار سوختگی، ۲۳ نفر (۳ ٪) باردار بودند. میانگین سنی افراد مورد مطالعه ۲۷ سال می باشد. متوسط سوختگی سطح کل بدن در بیماران۳۲٪و در خانمهای باردار۵۸ ٪بود. ۶نفر(۲۶,۱٪) از بیماران در سه ماهه اول بارداری ۱۰ نفر(۴۳,۵٪) در سه ماهه دوم و۷نفر((۳۰,۴ در سه ماهه سوم بار داری دچار سوختگی گردیده اند. عامل سوختگی در همه بانوان شامل: مواد اشتعال زا ۳۲٪ انفجارگاز۲۶٪, مایعات داغ ۲۰٪ آتش۱۱٪ و سایر موارد ۱۱٪می باشند این آمار در خانمهای باردار به ترتیب ٪۳۴.۸(۸ نفر) بدلیل مواد قابل اشتعال ۳۰,۴٪ (۷ نفر)انفجار گاز، و مایعات داغ ۱۳٪(۳ نفر) است. متوسط اقامت در بانوان ۹ روز و در خانمهای باردار۱۳ روز بود.از میان بیمارانی که به دلیل خودسوزی بستری شدند متوسط سوختگی انان ۸۷ ٪ درصد بوده است. تعداد۴ نفر از مادران معادل (٪۱۷.۴) مرده زایی و ۱۹بیمار (٪۸۲.۶) نیز کودکان خود را زنده بدنیا آوردند. در مجموع میزان مرگ و میر همه بیماران ٪۲۰ بود که افرادفوت شده میانگین سوختگی۷۵٪ داشته اند و در خانمهای باردار این امار ۱۳٪ با میانگین سوختگی ٪۸۷می باشد.

Conclusion : سطح ارایه خدمات در این مرکز و انجامteam work برای مادران باردار، موجب کاهش مرگ و میر علی رغم میانگین درصد سوختگی بالاتر گردیده است. در سه ماهه سوم بارداری هیچ گونه سقطی اتفاق نیافتاده است.

Keywords : سوختگی ،مادران باردار،مرگ و میر

Prevalence and profile of antibiotic susceptibility of various bacteria isolated from burn patients with ventilator-associated pneumonia (VAP): A cross-sectional study in North of Iran

Hadi Sedigh Ebrahim-Saraei[1], Mohammadreza Mobayen[2], Mahsa Sadeghi[3], Tofigh Yaghoubi[4], Siamak Rimaz[5], Nastaran Habibollahpour[6]

1. Razi Clinical Research Development Unit, Razi Hospital, Guilan University of Medical Sciences, Rasht, Iran
2. Burn and regenerative medicine research center, Guilan University of medical sciences, Rasht, Iran
3. Burn and regenerative medicine research center, Guilan University of medical sciences, Rasht, Iran
4. Razi Clinical Research Development Unit, Razi Hospital, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and regenerative medicine research center, Guilan University of medical sciences, Rasht, Iran
6. Department of Microbiology, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Ventilator-associated pneumonia (VAP) is one of the most important nosocomial infections, especially in intensive care unit (ICU) patients, which can increase mortality and treatment costs. Therefore, the present study identifies the etiological factors of VAP and patterns of antimicrobial resistance of these microorganisms in burn patients admitted to a burn hospital in northern Iran.

Methods : This study was performed on burn patients admitted to the hospital from March 2017 to March 2020. Patients ' files extracted information about age, sex, underlying diseases, length of hospital stay, outcome, cause of the burn, and antibiotic resistance pattern. The results were analyzed by SPSS software version 24.

Results : Out of 29 patients, 22 (75.9%) were male patients. The mean age of patients was 15.96 ± 41.21 years. Pseudomonas aeruginosa (48.3%) and Klebsiella pneumonia (17.2%) were the most common microorganisms causing pneumonia. Other microorganisms identified included Escherichia coli (10.3%), Staphylococcus coagulase-negative (6.9%), and unknown (17.2%). There was no significant relationship between the type of pneumonia-causing microorganisms with sex, age group, burn percentage, underlying diseases, burn cause, and

treatment outcome (P <0.05). Also, the highest resistance of the isolates was observed against the antibiotics of ofloxacin, ampicillin, tetracycline, clofazimine, vancomycin, cephalexin, cefixime, and cefoxitin. Amikacin (52.9%) and tobramycin (41.7%) were the most effective antibiotics.

Conclusion : Since the statistical relationship between patients' gender, age group of patients, percentage of burns, underlying diseases, types of burn mechanisms, and therapeutic outcome of the disease was not seen with the type of microorganisms involved, it can be concluded that the environmental flora is more than the mentioned variables are related to the type of microorganism causing pneumonia.

Keywords : pathogenic pattern, ventilator-associated pneumonia, burns

تاثیر تله نرسینگ بر کیفیت زندگی بیمارن سوختگی در بیمارستان سوانح و سوختگی اهواز در سال ۱۴۰۰

Mahdi Hatami dezdarani[۱], saeedh baeji[۲], maryam bron[۳]

۱. دانشگاه علوم پزشکی جندی شاپور اهواز، اهواز، ایران
۲ کمیته تحقیقات دانشجویی، دانشگاه علوم پزشکی جندی شاپور اهواز، اهواز، ایران؛ ۱
دانشگاه علوم پزشکی جندی شاپور اهواز، اهواز، ایران ۲ کمیته تحقیقات دانشجویی، دانشگاه علوم پزشکی جندی شاپور اهواز، اهواز، ایران؛ ۱
۳. دانشگاه علوم پزشکی جندی شاپور اهواز، اهواز، ایران ۲ کمیته تحقیقات دانشجویی، دانشگاه علوم پزشکی جندی شاپور اهواز، اهواز، ایران؛ ۱

Background and Aim : تاثیر تله نرسینگ بر کیفیت زندگی بیمارن سوختگی در بیمارستان سوانح و سوختگی اهواز در سال ۱۴۰۰
Methods : دو گروه مداخله و یک گروه کنترل وجود دارد. گروه های مداخله شامل دو زیر گروه هستند. گروه اول گروه تله نرسینگ است که شامل ۳۰ بیمار می باشد. محتوی آموزشی از طریق مکالمه تلفنی طی زمان مشخص انتقال داده می شود؛ دومین گروه مداخله گروه بدون آموزش تله نرسینگ است، تعداد بیماران این گروه ۳۰ بیمار است که محتوای آموزشی مربوطه زمان بستری بوده ؛ در این مطالعه به مدت هشت هفته طی دو جلسه در هفته به مدت ۲۰ دقیقه در هرجلسه تحت آموزش تله نرسینگ قرار گرفتند. در ابتدا و انتهای مطالعه پرسشنامه اختصاصی پرسشنامه اختصاصی کیفیت زندگی سوختگی(BSHS-B) تکمیل شد.
Results : پژوهش بیانگر آن بود که میانگین کیفیت زندگی در مدیریت در هر دو گروه قبل از مداخله, اختلاف آماری معنی داری را نشان نمی دهد (p:۰/۰۰۵) پس از دادن آموزش به گروه مداخله, میانگی ن کیفیت زندگی; در یک و دو ماه بعد به طور معنی داری در مقایسه با گروه کنترل افزایش پیدا کرد (p:۰/۰۱۵).سطح تحصیلات در پارامترهای کاره ساده،عملکرد ساده و جنسی روبط بین فرد معنادار بود و مهمترین پارامتر که در میزان سوختگی تاثیر داشته است وضعیت اقتصادی بوده. ۶۵ درصد وضعیت اقتصادی مناسب و ۳۹ درصد وضعیت اقتصادی کم داشته اند و ۸۶ درصد سابقه مصرف سیگار را داشته اند. و ۷۴ درصد از جمعیت روستایی بوده اند.
Conclusion : آموزش از راه دور یا همان تله نرسینگ تاثر زیادی در بیمارن با وضعیت اقتصادی ضعیف و افراد با سطح تحصیلات کمتر از دیپلم را دارد و آموزش از راه دور سبب کنترل و پیگیر پرستاران باعث بهبودی زخم های سوختگی و افزایش کیفیت زندگی افراد دچار سوختگی می شود
Keywords : تله نرسینگ،کیقیت زندگی.

Comparison of the Silver Nanocrystalline Dressing and Paraffin Gauze on Split-thickness Skin Graft Donor Site: A Randomized Controlled Clinical Trial

Mahmood Omranifard[1], danial Omranifard[2], nadia Omranifard[3], ehsaneh najari ardestani[4]

Department of Plastic Surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Esfahan, Iran
School of Medicine, Isfahan University of Medical Sciences, Isfahan, Esfahan, Iran
School of Medicine, Isfahan University of Medical Sciences, Isfahan, Esfahan, Iran
Imam MusaKazem (AS) Hospital, Isfahan University of Medical Sciences, Isfahan, Iran

Background and Aim : : Different methods are used for skin graft wound dressing, but an ideal and single method to accelerate wound healing and prevent postoperative complications has not yet been provided. This study aimed was of compare the effect of silicon coating with silver nanocrystal (Ag coat) and regular petroleum jelly coating on donor graft healing in patients undergoing skin grafting.

Methods : In this clinical trial study, 49 patients with Donor graft were selected, and the graft donor site wound was randomly divided into two parts. One wound portion was dressed with silver Nanocrystal and the other were dressed with paraffin. The patients were followed up for 6 months and the recovery status, duration of dressing, post-operative complications, and comfort of the patient and the treatment staff were examined and compared in the two mentioned parts.

Results : The duration of wound dressing in the intervention and control groups was 10.49 ± 2.2.8 and 13.90 ± 2.04 days, respectively, and the difference between the two groups was significant (P<0.001). There was a significant difference in the changes in the wound scar score between the two groups, and the area of the wound that was dressed with silver nanocrystals was in a better condition (P<0.0001). The frequency of wound healing was also more favorable at the end of the first and third month in the silver nanocrystal group, so that at the end of the first month, 75.5% of the paraffin dressings and 93.9% of the silver nanocrystal dressings had healed the graft wound.

Conclusion : The results of the present study showed that the use of nanocrystalline silver dressing compared to paraffin gas dressing with therapeutic results and faster healing of the wound, more comfort for the patient and the treatment staff, smaller scar, less pain and itching and also faster return to normal vessels

Keywords : skin graft, scar, silver nanocrystal

A comparative study of the epidemiology and outcomes of burns during the one-year period of the spread of the Covid-19 pandemic compared to the one-year period before, in a burn center

Mahsa Sadeghi[1], Hadi Sedigh Ebrahim Saraei[2], Mohammadreza Mobayen[3], Tofigh Yaghoubi[4], Arman Azargoon[5], Arman Bagheri[6], Mohammad Tolouei[7]

1. Burn and regenerative medicine research center, Guilan University of Medical Sciences, Rasht, Iran
2. Department of Microbiology, Virology and Microbial toxins, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
3. Burn and regenerative medicine research center, Guilan University of Medical Sciences, Rasht, Iran.
4. Razi Clinical Research Development Unit, Razi Hospital, Guilan University of Medical Sciences, Rasht, Iran
5. Department of Microbiology, Virology and Microbial toxins, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
6. Department of Microbiology, Virology and Microbial toxins, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
7. Burn and regenerative medicine research center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Burn patients usually require long-term hospitalization and several surgeries, which exposes them to the risk of increased infection and transmission of the corona virus. Therefore, the purpose of this study is to compare the epidemiology and outcomes of burns during the one-year period of the Covid-19 pandemic compared to the one-year period before that in burn patients admitted to the Velayat Hospital in Rasht.

Methods : In this cross-sectional study, demographic and clinical data of burn patients hospitalized in Rasht province hospital during the covid-19 epidemic period and the year before that were collected. To check the relationship between qualitative variables, chi-square and Fisher tests were used, and to check the relationship between quantitative variables, the non-parametric Kruskal-Wallis test was used. All analyzes were done with SPSS software version 28.

Results : In this study, the average age of burn patients with Covid in 2019 was 47.82 years, 76.9% were men and 23.1% were women. According to the results, there is no significant relationship between the gender of the patients and the investigated factors. Burned patients suffering from covid often had second and

third grade burns, and the cause of their burns was mostly fire and flames. The need for mechanical ventilation, the presence of an underlying disease, the rate of infection, the death rate, the average percentage of burns, the average length of hospitalization and the average length of hospitalization in the intensive care unit were significantly higher in burn patients with Covid than in other groups ($p < 0.05$).

Conclusion : The findings of this study showed that burn patients with covid are often at greater risk than burn patients without covid and it is necessary to consider covid treatment protocols in addition to burn treatments in order to reduce negative outcomes in these patients.

Keywords : Burns, covid-19, pandemic, outcome

ارزیابی اثرات عصاره هیدروالکلی ریشه شیرین بیان بر پروسه ی بهبود زخم ناشی از سوختگی درجه ی دو

mahya azimi[1], محمد ابراهیم زاده اردکانی [2], محسن ذبیحی[3], علی محمد رنجبر[4], فرهاد محمدی[5], بهاره هاتفی اردکانی[6]

۱. کارشناس پرستاری، بیمارستان شهدای محراب، دانشگاه علوم پزشکی شهید صدوقی یزد، یزد ، ایران.
۲. متخصص بیماری های پوست، بیمارستان شهدای محراب ،دانشگاه علوم پزشکی شهید صدوقی یزد،یزد،ایران.
۳. دانشکده دارو سازی،دانشگاه علوم پزشکی شهید صدوقی یزد،یزد،ایران.
۴. دانشکده دارو سازی،دانشگاه علوم پزشکی شهید صدوقی یزد،یزد،ایران
۵. دانشکده دارو سازی،دانشگاه علوم پزشکی شهید صدوقی یزد،یزد،ایران
۶. دانشکده دارو سازی،دانشگاه علوم پزشکی شهید صدوقی یزد،یزد،ایران.

Background and Aim : سوختگی¬ها یکی از شایع¬¬ترین آسیب¬ها در سرتاسر جهان هستند. سوختگی نوعی آسیب گوشت یا پوست می-باشد که به وسیله گرما، الکتریسیته، مواد شیمیایی، اصطکاک و مواد رادیواکتیو ایجاد می¬شود امروزه به علت آثار شناخته شده جانبی و ناخواسته بسیاری از داروهای سینتتیک، استفاده از مواد گیاهی و طبیعی در درمان بیماری¬ها مـورد توجـه قرار گرفته است. در این مطالعه تأثیر عصاره هیدروالکلی ریشه این گیاه در بهبود زخم سوختگی مورد بررسی قرار گرفت.

Methods : این پژوهش یک کارآزمایی بالینی دوسوکور بود، که در آن ۵۰ بیمار با سوختگی درجه دو به شیوه نمونه-گیری در دسترس از بین بیماران مراجعه کننده به بیمارستان شهدای محراب استان یزد و بیمارستان امام موسی کاظم اصفهان انتخاب و وارد مطالعه شدند. ۵۰ شرکت کننده به طور تصادفی به دو گروه شاهد (هیدروژل پایه) و مداخله (هیدروژل حاوی عصاره هیدروالکلی ریشه شیرین¬بیان) تقسیم شدند. مداخله به مدت ۱۵ روز ادامه یافت و در مدت این ۱۵ روز فرآیند بهبود زخم توسط یک چک لیست در روزهای اول، سوم، ششم، دهم و پانزدهم ارزیابی و ثبت شد. داده¬ها با استفاده از نرم افزار آماری SPSS نسخه ۲۰ و با آزمون¬های تی¬ استیودنت مستقل و من¬ویتنی یو تجزیه و تحلیل شدند.

Results : مطالعه حاضر نشان داد که میزان التهاب، قرمزی، درد، سوزش و ظاهر عمومی زخم در گروهی که از ژل حاوی عصاره هیدروالکلی ریشه شیرین¬بیان استفاده کرده بودند به طور معناداری کمتر از گروه شاهد بود ($P<0,05$) و در واقع فرآیند بهبود در این گروه سریع¬تر اتفاق افتاده است.عصاره هیدروالکلی ریشه شیرین¬بیان قرمزی ناحیه سوختگی را از روز ششم و سوزش، التهاب و درد را نیز از روز سوم به طور معناداری نسبت به گروه دارونما کاهش داده است. همچنین ظاهر عمومی زخم نیز در روز پانزدهم در گروهی که از ژل حاوی عصاره هیدروالکلی ریشه شیرین¬بیان استفاده کرده بودند، وضعیت مطلوب¬تری داشت

Conclusion : بر¬اساس یافته¬های این مطالعه عصاره هیدروالکلی ریشه شیرین¬بیان می¬تواند فرآیند بهبود زخم ناشی از سوختگی درجه دو را سرعت بخشد، بنابراین استفاده از آن در کنار سایر درمان¬های سوختگی¬های خفیف و متوسط توصیه می¬شود

Keywords : سوختگی، شیرین بیان، عصاره هیدروالکلی

فراوانی سوء مصرف مواد مخدر در بیماران بزرگسال بستری شده در بخش سوختگی بیمارستان امام رضا در سال ۱۳۹۷

Majid Khadem-Rezaiyan[1], Meisam Heidary[2], Ali Ahmadabadi[3], Seyed Hasan Tavousi[4], Mohamad Baghban[5], Zahra Mehrabadi[6], Arezou EbrahimNejad[7]

1. Assistant Professor, Department of Community Medicine, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
2. Medical Student, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
3. Associate Professor, Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
4. Associate Professor, Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
5. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
6. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
7. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : مطالعات اندکی در مورد میزان فراوانی سوء مصرف مواد در بیماران سوختگی انجام شده است. هدف از این مطالعه بررسی فراوانی سوء مصرف موادمخدردربیماران بزرگسال بستری شده در بخش سوختگی بیمارستان امام رضا در سال ۱۳۹۷ می باشد.

Methods : پژوهش حاضر یک مطالعه توصیفی- مقطعی است که فراوانی سوء مصرف مواد مخدردر بزرگسالان را در سال ۱۳۹۷ در بیماران مراجعه کننده به بخش سوختگی بیمارستان امام رضا (ع) علوم پزشکی مشهد بررسی می کند. ابتدا فهرست بیماران پذیرش شده با تشخیص سوختگی از سامانه مدیریت بیمارستانی (HIS) استخراج گردید. سپس بیماران بالای ۱۲ سال وارد مطالعه شدند. با مراجعه به پرونده بیماران با استفاده از چک لیست از قبل طراحی شده، داده ها جمع آوری شد. داده های مورد نظر با استفاده از فرم مخصوص شرح حال سوختگی مندرج در پرونده های سوختگی، شرح حال وگزارش های پرستاری تکمیل گردید.

Results : در مجموع ۳۰۰ بیمار مورد ارزیابی قرار گرفتند. حدود نیمی از بیماران بستری (۵۲٪) در بخش های سوختگی به صورت هم زمان سوء مصرف مواد نیز داشتند که از میان این افراد ۸۴ درصد ماده مخدر سنتی، ۸ درصد ماده مخدر صنعتی و ۸ درصد هر دو نوع ماده مخدر را مصرف می کردند. هر چند بین دو جنس تفاوت آماری معنی داری وجود نداشت اما جوانان ۳۹ - ۲۰ ساله ($p<۰.۰۰۱$) و افراد متأهل ($p=۰.۰۲۸$) بیش از سایر گروه ها سوء مصرف مواد داشتند و در افراد دارای تحصیلات دانشگاهی ($p<۰.۰۰۱$) سوء مصرف مواد کمتر از سایر گروه های تحصیلی بود.

Conclusion : براساس این پژوهش به نظر می رسد میزان فراوانی سوء مصرف مواد در بیماران سوختگی بالا میباشد. پس لازم است در زمان بستری بیماران سوء مصرف کننده شناسایی تا ضمن پیشگیری از سندرم قطع مصرف مواد در زمان ترخیص به مراکز معتبر ترک اعتیاد معرفی شوند.

Keywords : سوء مصرف مواد مخدر، بیماران سوختگی، بخش بستری، بیمارستان امام رضا (ع).

Self-immolation: a suicide method with a high probability of recurrence

Majid Khadem-Rezaiyan[1], Amirmahmoud Ahmadzade[2], Seyed Hasan Tavousi[3], Zahra Mehrabadi[4], Arezou EbrahimNejad[5], Mohamad Baghban[6]

1. Assistant Professor, Department of Community Medicine, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
2. Medical Student, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
3. Associate Professor, Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
4. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
5. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
6. Burns and reconstructive department, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : Suicide is one of the public health challenges which involves the individual, family, and even society. The epidemiological study of suicide is one of the most important measures for designing effective preventive interventions. This study evaluated cases who had self-immolation in Mashhad, Khorasan Razavi province.

Methods : This cross-sectional study was performed on individuals who were admitted with self-immolation at Imam Reza Hospital of Mashhad (the third-level referral center) during 2017-2019. A trained interviewer collected demographic data, reasons for current suicide attempts, and history and method of any previous suicide attempts. Data were analyzed using SPSS version 28.

Results : Overall, 44 patients were included out of whom 73% were female. The mean age of patients was 30.2 ± 13.1 (median=26.5, minimum=14 and maximum 74) years. The patients declared that they committed current self-immolation due to familial conflicts (68.2%), financial problems (27.3%), being jobless (18.2%), psychological illness (13.6%), familial attention seeking (9.1%), addiction (6.8%), and unsuccessful love (6.8%). More than half of the patients (55.8%) had a previous history of self-immolation and the others had histories of suicide attempts by drug poisoning (23.3%), poisoning with poison (9.3%), self-harm (9.3%), and hanging (2.3%).

Conclusion : The self-immolation method for a suicide attempt is not only recurrent but also a promising method for successful suicide attempts in patients with a suicide history. Proper informative intervention should be designed for these two groups to prevent self-immolation.

Keywords : self-immolation, suicide, burns

Effects of Age, Burn, and Amount of Physiotherapy Services on the Developmental Status of Children under 5 Years of Age with Burn Injuries using the Ages and Stages Questionnaire

Maryam Kiani haft lang[1], Neda Orakifar[2], Noshin Kashisaz[3]

1. PhD Student, Department of Physiotherapy, School of Rehabilitation Sciences, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran. Musculoskeletal Rehabilitation Research Center,
2. Assistant Professor, Department of Physiotherapy, School of Rehabilitation Sciences, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran. Musculoskeletal Rehabilitation Research Center
3. BA, Accident and Burn Hospital, Ahvaz Jundishapur University of Medical Sciences

Background and Aim : Burning is one of the most important injuries that threaten children's health, especially at the age of less than four years. Despite the remarkable progress in health care for burn injury , it is clear that burns have many consequences for children with burn injury. In addition, childhood is very important period for developmental process. during this period, children acquire many skills in different areas of motor, cognitive and social performance. so it seems that burn injuries can affect the children's developmental process. The aim of this study was to investigate the effects of age, burn, and the amount of receiving physiotherapy services on the developmental status of children under 5 years of age with burn injuries using the ages and stages questionnaire (ASQ).
Methods : In this cross-sectional study, which was conducted using a descriptive-analytical method, information was extracted on 93 children under 5 years of age with 2nd and 3rd degree burn injuries who were admitted to Ahvaz Accident and Burn Hospital. The electronic link of ASQ appropriate to the child's age group was sent to one of the parents. They were asked the number of physiotherapy sessions after discharge by phone.
Results : The area of fine movements showed the highest frequency of developmental delay (8.25%). The results of Mann-Whitney analysis showed that the average age of children with fine movement disorders (area 3) was higher ($p= 0.016$) and more time had passed since their burns ($p= 0.019$) compared to healthy people. No statistically significant difference was observed between the number of sessions receiving physiotherapy services during hospitalization ($p = 0.74$) and discharge ($p = 0.69$) between these two groups

Conclusion : Burns are one of the influential factors in the delay of children's developmental status, which probably involve the areas of motor development (fine and gross movements) and problem solving. Movement disorder is more common in old age. Also, as more time passes since the burn, the delay of fine movements is more visible

Keywords : Burn injury, Developmental delay, Children, Physiotherapy, Ages and stages questionnaires.

The Effect of Rhythmic Breathing on Pain of Dressing Change in Patients with Burns Referred to Ayatollah Mousavi Hospital

Mehri Bozorgnejad[1]

Mehri Bozorgnejad Faculty member of the School of Nursing and Midwifery, Iran University of Medical Sciences, Tehran, Iran. Responding Author

Background and Aim : Burn is the worst tragedy among modern societies that individuals may experience. One of the most important problems of burns is pain; particularly at the time of treatment including burn dressings, debridement, surgical incisions and physiotherapy. The aim of this study was to determine the effect of rhythmic breathing on pain of dressing change in patients with burns.

Methods : This semi-experimental clinical trial study with a control group was conducted on 60 eligible burn patients who were selected using convenient sampling method and allocated randomly in two groups of test and control (each n=30). Data collection tools included demographic data and pain observation questionnaires. The rhythmic breathing was individually and orally trained to the patients of test group in a room separated by dividers for a 20-minute session. The pain intensity in test and control groups before and after dressing was investigated for three consecutive days.

Results : Friedman test results showed that pain intensity in both control and test groups had statistically significant differences. The pain intensity after rhythmic breathing reduced more in the test group, and this reduction was more significant during 3 days.

Conclusion : Rhythmic breathing is an effective method on pain reduction of dressing change in patients with burn injuries.

Keywords : Rhythmic breathing, Pain, Burn, Dressing

Quality of life in women after burn injury in shahid motahary hospital in tehran2018

Mehri Bozorgnejad[1]

faculty member of Nursing School and Midwifery, Iran University of Medical Sciences .

Background and Aim : The burden of a burn-injured body, including loss of function, altered appearance and psychological distress, and burned is one of the most accidents in life span. Recent studies have manifested deferent outcomes after burn injuries. This, research conduct with aim Determination of quality of life in women after burn injury with contracted in body.
Methods : In this cross sectional study, data were collected at 3, 6, 12, and 18, months after burn injury in 180 women who had of any contracture. Quality of life was measured with Ferrans and Powers Quality of Life Index. Patient age, sex, date of burn injury, burn type, location, contractures, keloids and extent of burn (TBSA) were recorded for each case
Results : : Means of quality of life was 11.93 ± 2.55 (min 8.5, Max 21.5) and were different significantly after burn, particularly in the area of social and psychological function
Conclusion : The researchers found that abnormal (pathological) scarring was most likely to occur in patients who were younger, female Improving post-burn scarring outcomes is important because burn scars can have a major impact on a patient's quality of life, the researchers said. They noted that burn scars "have been associated with anxiety, social avoidance, depression, a disruption in activities of daily living, Psychological consults is important component of treatment for these women.
Keywords : : Quality of life, women, burn injury

Inhibitory activity of indigenous probiotic Lactobacillus isolates against Pseudomonas aeruginosa isolated from burn wounds

Meysam Hasannejad Bibalan[1], Hadi Sedigh Ebrahim-Saraei[2], Mohammadreza Mobayen[3], Reza Asadzadegan[4], Mahsa Sadeghi[5]

1. Department of Microbiology, Virology and Microbial toxins, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.
2. Department of Microbiology, Virology and Microbial toxins, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.
3. Burn and regenerative medicine research center, Guilan University of Medical Sciences, Rasht, Iran
4. Department of Microbiology, Virology and Microbial toxins, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.
5. Burn and regenerative medicine research center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Pseudomonas aeruginosa, a common pathogen in burn wound infection, has become naturally or acquired resistant to many antimicrobial agents. It seems reasonable to use probiotics as an alternative to antibiotics to help the treatment process of patients with Pseudomonas infection. The present study investigated the antimicrobial and anti-biofilm effects of indigenous Lactobacillus probiotic strains on P. aeruginosa isolated from burn wound infection in laboratory conditions.

Methods : The effect of 7 probiotic strains isolated from infant feces on the pathogenicity factors of P. aeruginosa including protease, elastase, antibiofilm, antipyocyanin, swarming and twitching activity was measured. Also, to evaluate the antimicrobial activity of probiotics, diffusion methods in the well and microbroth dilution were used.SPSS version 22 software was used for data analysis.

Results : A total of 30 clinical isolates of P. aeruginosa were isolated. Based on the findings, lactobacilli number 1, 4, 5, 8 had the highest inhibitory effect on the pathogenic factors of P. aeruginosa isolates. L10 and L12 showed the lowest inhibitory activity. Also, none of the probiotic strains had any effect on the swarming and twitching of pathogens.

Conclusion : The present study explained that probiotics can be promising alternatives to combat P. aeruginosa pathogenicity. More studies are needed to describe different outcomes.

Keywords : Probiotic, burn wound, Pseudomonas aeruginosa

Determination of the effectiveness of Proderm® herbal ointment in comparison with Nitrofurazone cream in second degree burn wounds: a randomized clinical trial

Mohammad amin Vatankhah[1], Mohammad Vakili[2], Reza Panahizadeh[3], Mehriar Nadr Mohammadi[4], Setareh Nasiri Zeidi[5]

1. Students Research Committee, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran
2. Department of Surgery, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran
3. Students Research Committee, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran
4. Department of Psychiatry, Fatemi Hospital, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran
5. Department of Gynecology and Oncology, Iran University of Medical Sciences, Tehran, Iran

Background and Aim : Burn is one of the issues that has a number of negative financial on the patients. Researchers are turning to complementary treatments and reasonable herbal compounds due to the high prices of new dressings and burn therapy. In light of this, the purpose of this research was to investigate the impact of topical use of Nitrofurazone and Proderm® herbal ointment on the healing of second-degree burns.

Methods : This study was a prospective, randomized, double-blind trial and was conducted at the Burn Division of Fatemi hospital (Ardabil, Iran), during 2020-2021. Patients with second degree burn were eligible for entry into the study if they were the ages of 2–50 years. Exclusion criteria includes dermatologic disorders such as psoriasis, eczema, vitiligo, and skin hypersensitivity also patients with epilepsy, cardiovascular diseases, diabetes mellitus, hepatitis and HIV infection and pregnant women were excluded from the study. Finally, a sample of 50 patients enrolled in the study and divided into intervention (n=25) and control (n=25) groups. The daily dressing in the intervention group was performed by a 2-3 mm layer of Proderm® ointment and dry gauze. In the control group, the daily dressing was covered with a 2-3 mm layer of 2% Nitrofurazone and dry gauze. Data collection was done by a specialist who was unaware of the grouping. Data analysis was performed using SPSS V.20 software by the one-way ANOVA with Tukey's post hoc test and student's T test.

Results : The Proderm group demonstrated higher improvement in the itching intensity findings over the course of 4 weeks, although the patients' pain, burning, and itching intensity steadily reduced in both groups receiving Nitrofurazone and Proderm treatments (P<0.05). In spite of this, there was no significant difference between the two groups in this regard (P>0.05). Additionally, there were no significant differences between the two groups in the shrinkage of the size of the burns (P>0.05).

Conclusion : Proderm® and Nitrofurazone on exhibited comparable effects on the healing of second-degree burns with less expanded area, according to the findings of the current research. However, further research is required before Proderm® can completely replace Nitrofurazone.

Keywords : Burn, Proderm, Nitrofurazone, herbal medicine

The Relationship between Background Pain and Anxiety in patients with Burn injury: A cross-sectional study

Mohammad Rahimkhani[1], Fatemeh Mohaddes Ardebili[2], Tahereh Najafi Ghezeljeh[3], Hamid Haghani[4], Mohammad Eghbali[5], Mohammadreza Askari[6]

1. Nursing Instructor, Department of Medical Surgical Nursing, School of Nursing and Midwifery, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran.
2. Faculty Member in Medical Surgical Group, School of Nursing and Midwifery, Iran University of Medical Sciences and Health Services, Tehran, Iran;
3. PhD Assistant Professor, Medical- Surgical Group, School of Nursing and Midwifery, Iran University of Medical Sciences, Tehran, Iran;
4. Department of Statistic and Mathematics, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran
5. PhD Assistant Professor, Medical- Surgical Group, School of Nursing and Midwifery, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran;
6. Instructor of Geriatric Nursing, Department of Nursing, School of Nursing and Midwifery, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran

Background and Aim : Burn injury is an example of damage to a person's health that causes many problems in the patient, including pain and anxiety. The purpose of this study was to determine the correlation between pain and anxiety in burn patients.
Methods : In this cross-sectional study, 86 patients with burn injury admitted to Shahid Motahhari hospital, were selected using available sampling. Anxiety and Background pain severity were measured using spielberger state anxiety inventory and visual analog scale In two occasions, with an interval of one week. Data were analyzed by descriptive statistics using Spss version 20.
Results : : According to the study, there was no significant statistical correlation between background pain severity and level of anxiety in the first visit (p=0.609, r=0.056), but in the second visit, a significant relationship was observed between these two variables (p=0.002, r=0.334).
Conclusion : According to the results of this research, anxiety and underlying pain are considered to be related and annoying factors for burn patients. Therefore, it is recommended to pay more attention to reducing pain and anxiety simultaneously in burn patients.
Keywords : burn, pain, background pain, anxiety, burn anxiety.

Management of hypertrophic burn scars with massage therapy

Mohammad Torabi[1]

1. Hamadan University of Medical Sciences

Background and Aim : : One of the major concerns of patients after the acute stage of burns is the remaining burn marks and hypertrophic scars at the burn site. Various factors play a role in the creation of hypertrophic scars, which according to studies, along with drug treatments, radiation therapy, and surgery, the role of massage therapy has also had a significant impact on the prevention of hypertrophic scars. This study was conducted with the aim of reviewing the management of hypertrophic burn scars with massage therapy.
Methods : The current research is a systematic review research that studies are selected through the Prisma model and using the specialized keywords of burn, hypertrophic scar, massage therapy, and complementary medicine in Scopus, ScienceDirect, PubMed, Web of Science, Google databases. Scholar, SID, Magiran were searched in the period from 2010 to 2022. Research articles were purposefully selected based on exclusion criteria (unavailability of the full text of the article, letter to the editor and no abstract) and inclusion criteria (relevance to the research objective, having a structured framework and publication in a reputable journal). Finally, 18 studies were selected and analyzed after evaluating the quality of articles using Gifford criteria.
Results : : According to the results, various medical treatments (silicone gel, ointment) and complementary treatments (massage, pressure, hydration, exercise) have been introduced to prevent hypertrophy after burns. According to the results, the best recommended techniques are circular massage with local pressure and then creating skin folds, and permanent moisturizing is recommended regardless of the type of massage. By using different types of massage therapy methods with and without using different types of lubricants, it showed that the time of massages varied from 15 to 30 minutes and the number of massage sessions varied from one to three times a week for 5 to 12 weeks.
Conclusion : The results of the studies showed that massage therapy according to the degree of scar maturity had positive results on scar flexibility, thickness, melanin, redness and adhesion, firmness and itching.
Keywords : burn, hypertrophic scar, complementary medicine, massage therapy

بررسی رژیم های غذایی مورد استفاده بیماران سوختگی بستری در بیمارستان سوانح سوختگی و ترمیمی امیرالمومنین(ع) و ارتباط آن با تظاهرات بالینی و تغییرات فاکتورهای سرمی در طی درمان

Mohsen Omidi[۱], عبدالخالق کشاورزی[۲], محسن امیدی[۳], مینا کریمی[۴], سیامک هوشمند[۵], میترا زردشت[۶], ندا پیربنیه[۷]

۲. مرکز تحقیقات سوختگی و ترمیم زخم، گروه جراحی، بیمارستان امیرالمومنین (ع)، دانشکده پزشکی، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۳. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۴. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۵. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۶. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۷. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران

Background and Aim : سوختگی یکی از مخربترین آسیبها و نگرانی عمده بهداشت عمومی جهانی است.تغذیه درمانی به عنوان یک درمان مهم برای بیماران سوختگی در نظر گرفته می شود. هدف از این مطالعه بررسی ارتباط تغذیه ای در بیماران سوختگی با مدت اقامت و پیامدهای این بیماران است.

Methods : مطالعه توصیفی- مقطعی و گذشته نگر بر روی بیماران بستری سوختگی که در بیمارستان سوختگی امیرالمومنین شیراز از اول فروردین سال ۱۴۰۰ تا پایان اسفند سال ۱۴۰۰ صورت گرفته است.داده ها از پرونده بیماران گردآوری و با روش های آمار توصیفی و نرم افزار آماری SPSS مورد بررسی قرار گرفت.

Results : از ۱۰۰ بیمار سوختگی، میانگین سنی افراد مورد مطالعه (۱.۶۹ ± ۴۶.۹۶)سال که رنج سنی ۲۲ تا ۸۱ سال بود. متوسط سوختگی سطح کل بدن در این بیماران (۱.۶۹±۱۸.۱۶) درصد بود. میانگین وزن و نمایه توده بدنی به ترتیب (۱.۵۷±۷۱.۹۹) و (۰.۵۷±۲۵.۶۸) بود. میانگین فاکتورهای سرمی آلبومین در ابتدای پذیرش ، اواسط بستری و زمان مرخص شدن به ترتیب(۳,۰۹±۰,۱۴، ۲,۸۸±۰,۱۱ و ۲,۷۶±۰,۱۱) بود. میانگین فاکتورهای سرمی هموگلوبین در ابتدای پذیرش ، اواسط بستری و زمان مرخص شدن به ترتیب(۰.۳۵±۱۳.۰۳، ۱۲,۰۴±۰,۲۹ و ۱۱,۲۶±۰,۳۱) بود. میانگین فاکتورهای سرمی پتاسیم در ابتدای پذیرش ، اواسط بستری و زمان مرخص شدن به ترتیب(۴,۰۱±۰,۱۰، ۳,۸۸±۰,۰۹ و ۳,۹۵±۰,۰۹) بود. بین دریافت پروتئین و مکمل و کالری با میزان فاکتورهای سرمی پتاسیم و هموگلوبین ارتباط معناداری وجود ندارد . آلبومین با کالری ارتباط معناداری دارد . بین دریافت کالری وپروتئین و مکمل با میزان مرگ ومیر ومدت اقامت بیماران ارتباط معناداری وجود ندارد. .بین رژیم های مختلف با میزان فاکتورهای سرمی (آلبومین وهموگلوبین) بیماران ارتباط معناداری وجود دارد ولی با میزان پتاسیم ارتباط معناداری ندارد. بین وضعیت تغذیه با میزان مرگ ومیر ارتباط معناداری ندارد ومدت اقامت بیماران ارتباط معناداری وجود با رژیم غذایی بیماران دارد.

Conclusion : در مجموع میزان دریافت کالری بیشتر باعث افزایش آلبومین سرم شد و با افزودن رژیم غذایی پر پروتئین بهبود در میزان آلبومین و هموگلوبین مشاهده گردید و رژیم غذایی باعث کاهش اقامت بیماران گردید.

Keywords : سوختگی ،تغذیه درمانی ،آلبومین،هموگلوبین

Epidemiology of chemical burn in Guilan province, IRAN: from 2009 to 2021

Mojdeh Esmailzadeh[1], Majid Salimi Lahiji[2], Seyed Ali Taghizadeh[3], Hojjat Eftekhari[4], Mohammadreza Mobayen[5]

1. Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences, Rasht, Iran
2. Guilan University of Medical Sciences, Rasht, Iran
3. Guilan University of Medical Sciences, Rasht, Iran
4. Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Burn injuries are among the most common traumas and result in tremendous physical and psychological injuries around the world most of which occurring in low- and middle-income countries. Although there have been studies about the epidemiology of burn injuries in Iran, but epidemiological investigations in case of Chemical burn in Guilan province have never been done before. This study was conducted to determine the epidemiology of chemical burn injuries in a Northern province in Iran, Guilan, during a 13-year period from January 2009 to January 2021.

Methods : A retrospective analysis of chemical burn patients was done in Velayat burn center, determining their age, sex, marital state, occupation, residential, cause of burn injury, degree of the injury, TBSA, place where the burn injury happened, anatomical site of the injury, season of the injury, month of the injury, day of the week of the injury, hour of the injury, co-morbidities, length of hospital stay, and patients' outcome.

Results : Among the 126 patients, 29.4% were female and 70.6% were male. Mean age of the burn patients was 34.45±22.16 years. 73.00% of patients were married and lived with their partners. About the time of injury, most chemical burns occurred as 36.5% in the summer season, 27.0% burn injuries happened on Wednesdays, and 38.9% took place during 6-11:59 AM. 49.2% of burn injuries happened in the indoors. In relation to burning intention, most reported cases were accidental (84.9%). Mean hospital stay and ICU days were 6.53±6.57 and 3.99 ± 5.39 days. Surgical treatments included escharotomy (43.7%), early skin graft (45.2%) and amniotic graft (11.1%). Of all patients, 95.2% were discharged well.

Conclusion : It was shown here that chemical burn injuries more likely to hap-

pen in the indoors and are common during the first hours of the day, and in the end day of the week, making it important to set up especial prevention programs suiting these situations. To minimize the occurrence of chemical burns and acid attacks, teaching methods of preventing burns is important at home and work, as well as restricting non specialists' access to chemicals.
Keywords : Burn injuries, Chemical burn, Epidemiology.

بررسی میزان سطح کشندگی ۵۰ درصد در بیماران سوختگی بستری در مرکز سوختگی امیرالمومنین در سال های ۲۰۱۸-۲۰۲۱ و مقایسه با سال های ۲۰۱۲-۲۰۱۸ با توجه به ارتقاء کیفیت مراقبت های ویژه و کنترل عفونت در بیمارستان

Abdolkhalegh Keshavarzi[۱], عبدالخالق کشاورزی[۲], احسان نیک زاده[۳], معصومه خرد[۴], سیامک هوشمند کوچی[۵], نادیا خانچی[۶], سامره مرادی[۷], میترا زردشت[۸], عبدالرحمان زارعی[۹], محمدکاظم تدین[۱۰]

۲. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۳. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۴. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۵. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۶. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۷. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۸. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۹. مرکز تحقیقات سوختگی و ترمیم زخم، بیمارستان امیرالمومنین (ع)، دانشگاه علوم پزشکی شیراز، شیراز، ایران
۱۰. مرکز تحقیقات کولورکتال دانشگاه علوم پزشکی شیراز

Background and Aim : آسیب های سوختگی و عوارض آن می توانند خسارات جبران ناپذیری به بیماران و نظام سلامت جامعه تحمیل کنند. درمان کارآمد می تواند کمک شایانی به کاهش این خسارت ها بکند. یکی از ابزارهای سنجش این کارایی، شاخص LA۵۰ می-باشد. سطح کشندگی ۵۰٪ به درصدی از سوختگی سطح بدن بر اساس TBSA اطلاق می شود که در آن میزان مرگ و میر ۵۰٪ می باشد. این مطالعه با هدف اندازه گیری LA۵۰ در سال¬های ۲۰۱۲-۲۰۱۸ و ۲۰۱۸-۲۰۱۲ در بیمارستان سوختگی امیرالمومنین (ع) شیراز انجام شد.

Methods : این مطالعه به صورت توصیفی گذشته نگر انجام شد و اطلاعات تمام بیمارانی که در سال های ۲۰۱۲-۲۰۲۱ به بیمارستان امیرالمومنین از طریق فرم رجیستری موجود در پرونده پزشکی آن¬ها جمع آوری گردید. این اطلاعات شامل سن، جنس، درصد TBSA، علت و قصد سوختگی، نتیجه درمان و بیماری های زمینه ای می شود.

Results : در این مطالعه ۷۶۱۵ بیمار مورد بررسی قرار گرفتند که ۶۵,۶٪ مرد و ۳۴,۴٪ زن بودند. همچنین میانگین درصد سوختگی در زنان (۳۲,۶٪) بیشتر از مردان (۲۶.۸٪) برآورد شد. نرخ مرگ و میر در سال های ۲۰۱۲-۲۰۱۸ شامل ۲۱,۵٪ بیماران و در ۲۰۱۸-۲۰۲۱ معادل ۱۶,۵٪ می باشد. بیشترین نرخ مرگ و میر در گروه سنی سالمندان بالای ۷۰ سال (۳۵,۵٪) ثبت شد. به صورت کلی نرخ مرگ و میر در زنان (۲۵.۸٪) بیشتر از مردان (۱۵,۳٪) برآورد شد. همچنین با بررسی فراوانی عوامل سوختگی مشخص شد که در گروه سنی اطفال، مایعات داغ و در گروه سنی بزرگسالان، شعله های آتش و انفجار عامل اصلی سوختگی می باشد. همچنین بیش ترین میزان مرگ و میر در بین عوامل سوختگی به شعله های آتش اختصاص دارد

Conclusion : تغییرات اتفاق افتاده در سال های اخیر در بیمارستان جدید سوانح سوختگی شامل ارتقا کیفیت مراقبت های ویژه و کنترل عفونت موثر واقع شده اند و باعث بهبود در نتیجه درمان بیماران گشته اند. این مسئله می¬تواند مقدمه و انگیزه¬ای برای ارتقا بیشتر کیفیت مراقبت¬های بهداشتی و درمانی از بیماران سوختگی باشد

Keywords : سوختگی، اپیدمیولوژی، مرگ و میر

بررسی تاثیر پرستاری از راه دور بر تغییر عملکرد بیماران بخش سوختگی بیمارستان تخصصی و فوق تخصصی شهدای محراب یزد

Moslem Heydaripur[۱], Mahya Azimi[۲], Zahra SHeybani[۳], sedigheh sadat Mokhtari[۴]

۱. دکترای مدیریت خدمات بهداشتی و درمانی، مسئول آموزش بالینی بیمارستان شهدای محراب ، دانشگاه علوم پزشکی شهید صدوقی یزد. یزد. ایران
۲. کارشناس پرستاری، بیمارستان شهدای محراب ، دانشگاه علوم پزشکی شهید صدوقی یزد. یزد. ایران
۳. کارشناس پرستاری، سوپروایزر سلامت، بیمارستان شهدای محراب ، دانشگاه علوم پزشکی شهید صدوقی یزد. یزد. ایران
۳. کارشناس پرستاری، سوپروایزر آموزشی، بیمارستان شهدای محراب ، دانشگاه علوم پزشکی شهید صدوقی یزد. یزد. ایران

Background and Aim : آموزش به بیمار یکی از حقوق اساسی بیمار و یک ضرورت در سیستم بهداشتی و درمانی است تا موجبات رضایت بیمار را فراهم نموده، بهبودی را سرعت بخشیده و میزان بستری مجدد را کاهش دهد. این مطالعه با هدف ارزیابی عملکرد آموزش به بیمار از دیدگاه بیماران ترخیص شده بخش سوختگی بیمارستان شهدای محراب یزد در سال ۱۴۰۰ انجام شد

Methods : در این مطالعه توصیفی – تحلیلی، ۱۵۰ نفر از بیماران ترخیص شده به روش نمونه¬گیری تصادفی انتخاب شدند، ابزار گردآوری داده¬ها از طریق پرسشنامه آموزش به بیمار پژوهشگر ساخته شده گردآوری شد.سپس داده ها به وسیله نرم افزار آماری SPSS و با استفاده از روش های آماری توصیفی و تحلیلی) آزمون های تی مستقل و آنووا(تجزیه و تحلیل گردید.

Results : از مجموع ۱۵۰ مورد سوختگی منجر به بستری در بیمارستان،۷۷ درصد از این بیماران مذکر و ۲۳ درصد مونث بودند. از این تعداد ۳۵ نفر زیر ۱۵ سال و ۱۱۵ نفر بالای ۱۵ سن داشتند. نتایج عملکردی آموزش به بیمار نشان داد که بیشترین رضایتمندی بیماران از آموزش تغذیه و رژیم مناسب(۶۴ درصد) و آموزش نحوه مصرف داروها و عوارض احتمالی و تداخلات دارویی (۶۱ درصد) ، ارائه آموزش¬های لازم در مورد مراقبت از زخم و پانسمان (۵۵ درصد)، ارائه آموزش¬های لازم جهت علایم هشدار دهنده و ادامه درمان (۵۱ درصد) و ارائه آموزش¬های لازم جهت بازتوانی و شروع مجدد فعالیت حرفه¬ای و شغلی(۴۵ درصد) بود.

Conclusion : این مطالعه نشان داد که وضعیت آموزش پرستاران در حیطه های بازتوانی و شروع مجدد فعالیت حرفه¬ای و شغلی و آموزش¬های لازم جهت علایم هشدار دهنده و ادامه درمان از وضعیت مطلوبی برخوردار نبوده است . لذا نقش آموزش توسط پزشکان و نقش مدیریت پرستاری در برنامه¬ریزی دقیق و نظارت در ارتقاء کیفیت آموزش به بیماران لازم و مهم می¬باشد، تا در صورت لزوم جهت رفع نارسایی ها اقدام لازم صورت پذیرد.

Keywords : آموزش به بیمار، پرستاری از راه دور، پرستار

بررسی ارتباط انگیزه شغلی با متغییر های دموگرافیکی در پرستاران بخش سوختگی بیمارستان تخصصی و فوق تخصصی شهدای محراب یزد

Moslem Heydaripur[۱], Mahya Azimi[۲], Ahmad razavi moghadam[۳], Seyed alireza pormazar[۴]

۱. دکترای مدیریت خدمات بهداشتی و درمانی، مسئول آموزش بالینی بیمارستان شهدای محراب ، دانشگاه علوم پزشکی شهید صدوقی یزد. یزد. ایران
۲. کارشناس پرستاری، بیمارستان شهدای محراب ، دانشگاه علوم پزشکی شهید صدوقی یزد. یزد. ایران
۳. کارشناس پرستاری، مدیر پرستاری، بیمارستان شهدای محراب ، دانشگاه علوم پزشکی شهید صدوقی یزد. یزد. ایران
پزشک عمومی،رئیس بیمارستان شهدای محراب، دانشگاه علوم پزشکی شهید صدوقی یزد، یزد، ایران

Background and Aim : هدف : در دنیای کنونی بیشتر مدیران خواهان کارکنانی هستند که بیش از وظایف معین شده در شرح شغلشان، فعالیت کنند. آنها دنبال کارکنانی هستند که فراتر از انتظارات عمل می کنند و به میل و خواست خود دست به رفتارهایی می زنند که جزء وظایف رسمی شغلی شان نیست اما بر عملکرد سازمان تاثیر مثبت دارد.

Methods : تعداد ۶۰ نفر از پرسنل مورد مطالعه به عنوان نمونه در این مطالعه شرکت نمودند. روش پژوهش ، توصیفی – تحلیلی بود و جهت جمع آوری داده¬ها از پرسشنامه نظریه هرزبرگ که پایایی آن از فرمول آلفا کرونباخ محاسبه شده (۹۶/۰) استفاده گردید. داده ها توسط نرم¬افزار spss و با آزمون¬های همبستگی و ANOVA تجزیه و تحلیل شد.

Results : از مجموع پرسنل مورد بررسی ۳۴ درصد مرد و ۶۶ درصد زن بودند که بیشتر این افراد بین ۳۱ تا ۳۵ سال سن داشتند. از نظر وضعیت تحصیلی ۶۰ درصد پرسنل با مدرک کارشناسی بودند و مدرک تحصیلی ۲۴ درصد آنها بالاتر از کارشناسی بود و۸ درصد فوق دیپلم بودند.در بررسی ها نشان داده شده بین سطح تحصیلات و عوامل مرتبط با حقوق و دست مزد رابطه معنی داری وجود دارد و بین جنسیت کارکنان و مسئولیت شغلی رابطه معنی داری وجود ندارد.

Conclusion : پرستاران سوختگی نسبت به دیگر پرستاران این حرفه در معرض فشار روانی و افسردگی بیشتر قرار دارند. لذا باید عوامل و مسائلی که باعث تاثیر گذاری در بهبود انگیزه و روحیه پرستاران می گردد، بیشتر مورد توجه مسئولین قرار گیرد. شناخت نیاز های کارکنان ، توجه به مسائل رفاهی و انگیزشی و عدالت در پرداخت ها از جمله عواملی هستند که می تواند در افزایش انگیزه و روحیه پرستاران موثر باشد.

Keywords : انگیزه شغلی، پرستار، سوختگی

Study on the Antimicrobial Effects of KAMOBURN Cream on Different Pathogenic Microbial Strains in burn wound infection

Narges Golab[1], Dr. Narges Golab[2], Dr. Mohammad Mehdi Kamkar[3], Dr. Mostafa Dahmardehei[4], Dr. Ideh Kamkar [5], Reza Mohammadzaheri[6], Fariba Ghaesmian [7], Behzad Naghash[8]

-

2. Atragin cosmetics laboratory, Tehran, Iran
3. Atragin cosmetics laboratory, Tehran, Iran
4. Burn research center Iran university of medical science
5. cosmetics laboratory, Tehran, Iran
6. cosmetics laboratory, Tehran, Iran
7. Atragin cosmetics laboratory, Tehran, Iran
8. Atragin cosmetics laboratory, Tehran, Iran

Background and Aim : Skin burn is one of the most common and debilitating forms of trauma. Burning has many side problems in human societies. Infection due to burn wounds is an important cause of death in general population. Despite treatment to eliminate infection, severe burn wounds continue to become infected some pathogens at relatively high rates. Increased bacterial resistance to antibiotics combined related to their administration has led many researchers to investigate alternative herbal treatments in recent years. KAMOBURN cream is an herbal medicine that includes a mixture of more than twenty natural different components and produces in Dr Kamkar International laboratory. According on the previous research it has great effects on healing the second degree of burn injury and now it has been administrated in many burning centers like shahid Motahari burned hospital at Tehran and other related clinics in all around Iran. The present study aimed to assess the antimicrobial effects of KAMOBURN cream on different microbial strains in burn wound infection in vitro.

Methods : The isolates were used for this study include Staphylococcus aureus (RTCC1885), Staphylococcus epidermidis (RTCC1892), Streptococcus pyogenes (RTCC1911), Pseudomonas aeruginosa (RTCC1477), Acinetobacter baumanii (RTCC1015), Escherichia coli (RTCC2325), Candida albicans (RTCC144). The susceptibility of isolates to KAMOBURN cream was evaluated using disk diffusion, well diffusion, MIC and MBC methods.

Results : KAMOBURN cream was effective against all of the strains, Acinetobacter baumannii was the most susceptible bacteria to the cream with a zone of Inhibition of 25 mm, followed by Staphylococcus aureus (23mm), Staphylococ-

cus epidermidis (21mm), Streptococcus pyogenes and Escherichia coli (20mm), Candida albicans (19mm) Pseudomonas aeruginosa (14mm). MIC findings it had maximal effect against Ac.b, and minimal efficiency against Strep. p and Can. albs, while MBC results showed maximal effect against Staph. aur and minimal effect against Ps.aeru.

Conclusion : According to the results, KAMOBURN herbal cream has suitable antimicrobial activity against certain pathogenic microorganisms and can be used alone or in combination with Antibiotics in the treatment of burn wounds.

Keywords : KAMOBURN Cream, Antimicrobial Effects, MIC, MB

Integron types, antimicrobial resistance and biofilm formation in Pseudomonas aeruginosa isolates of burn patients

Neda Pirbonyeh[1], Amir Emami[2], Fatemeh Javanmardi[3], Marziyeh Mansouri[4], Mitra Zadosht [5]

1. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Department of Biostatistics, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran
4. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
5. Department of Microbiology, Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.

Background and Aim : Pseudomonas aeruginosa is known as a leading cause of nosocomial infections worldwide. Integrons are associated with a variety of gene cassettes, which confer resistance to multiple classes of antibiotics. Antimicrobial resistance and biofilm production, as two main virulence factors of P. aeruginosa, are responsible for the persistence of prolonged infections. In this study, antimicrobial susceptibility patterns and biofilm and screening of the class 1, 2, and 3 integrons in P. aeruginosa isolated were investigated.
Methods : A total of 100 P. aeruginosa isolates were recovered from burn patients of the amir-al-momenin hospital in Shiraz. Bacterial identification was carried out by biochemical methods and PCR. Antibiotic susceptibility was measured by disk diffusion assay. Biofilm quantification was done by the microtiter method. The presence of Class 1, 2, and 3 integrons were evaluated by PCR.
Results : all the P. aeruginosa isolates were sensitive to colistin, but 78% were resistant to other antibiotics ($p \leq 0.05$). Susceptibility to ceftazidime, imipenem, and Aztreonam were higher among the isolates obtained. Class 1 integron was detected in 12%, while Class 2 integron was harbored by 4 % of the isolates, and 12% of the P. aeruginosa isolates showed strong biofilm activity. Class 1 integron-positive isolates were multi-drug resistant and showed strong biofilm.
Conclusion : This study shows that biofilms are favorable environments for integron-mediated acquisition/exchange of antibiotic resistance genes by bacteria and for the emergence of multidrug-resistant bacteria.
Keywords : Integron, biofilm, Pseudomonas aeruginosa, burn patients

بررسي اثرات مصرف خوراكي كوركومين بر روند بهبود بيماران سوختگي: يك مقاله مروري

Negar Mozaffarirad[۱], ali ahmadabadi[۲], amir koucheki[۳], zahra lalavi[۴]

1. Burn department of Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
2. Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
3. Burn department of Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran
4. Burn department of Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background and Aim : کورکومین یکی از سه کورکومینوئید موجود در زردچوبه است که ۲ تا ۵ درصد این ادویه را تشکیل می دهد.

Methods : با استفاده از کلید واژه های BURN, Burn Injury, Thermal Injury, curcumin, tumeric در پایگاه های Pubmed و Google Scholar تعداد ۳۶ مقاله یافت شد. از بین این مقالات ۱۵ مقاله کاملا با موضوع مرتبط بود که به طور کامل مطالعه شد و مطالب مفید آن در مقاله حاضر آورده شده است.

Results : اثرات آنتی اکسیدانی: کورکومین با از بین بردن ROS(عامل استرس سلول)، سرکوب فاکتورهای رونویسی مرتبط با اکسیداسیون، تولید و فعالیت آنزیم های آنتی اکسیدانی و ترکیبات آن ها مانند گلوتاتیون (GSH) و همچنین با دادن گروه های الکترون به عنوان آنتی اکسیدان عمل می کند. اثرات ضد التهابی:کورکومین از طریق کاهش بیان سایتوکاین های التهابی مانند فاکتور نکروز تومور آلفا (TNF-a) و اینترلوکین-۱ (IL-۱)، سرکوب فعالیت کینازها (یعنی AKT، PI۳K، IKK)، مهار فاکتور هسته ای NF-kB، دخالت در سایر مسیرهای سیگنال دهی مانند گیرنده فعال کننده پرولیفراسیون پروکسیزوم آلفا (PPAR-?)و گیرنده مشترک پروتئین تمایز میلوئیدی۲-MD۲-TLR۴)) TLR ۴، رقابت با LPS برای اتصال به MD۲ و مهار کمپلکس سیگنالینگ TLR۴-MD۲ التهاب را کاهش می دهد. اثرات ضد درد: مکانیزم های محتمل ذکر شده درباره کورکومین روی سرکوب درد مواردی شامل تاثیر مستقیم عوامل ضدالتهابی آزاد شده ناشی از کورکومین روی نورون‌های حساس به درد، سرکوب مسیر های انتقال درد، بهبود عملکرد مرفین، افزایش سطح نورآدرنالین را در لوب فرونتال و بخش هیپوکامپ مغز و اثر روی گیرنده های اوپیوئیدی می باشد. اثرات بر مراحل تکثیر و بازسازی: کورکومین از طریق بهبود فرآیند تکثیر سلولی، افزایش سنتز هیدروکسی پرولین و کلاژن، واسطه گری در نفوذ فیبروبلاست ها به محل زخم، تمایز فیبروبلاست ها به میوفیبروبلاست ها، کاهش دوره اپیتلیال شدن زخم و آپوپتوز سلول های التهابی باعث بهبود زخم می گردد.

Conclusion : شواهد حاکی از اثر بخشی کورکومین بر روند بهبود بیماران سوختگی می باشد، با این حال مطالعه انسانی در مورد اثرات مصرف خوراکی کورکومین در بیماران سوختگی انجام نشده است.

Keywords : زردچوبه، کورکومین، سوختگی، ترمیم زخم

بررسی تجارب روانی-اجتماعی بیماران مبتلا به بدشکلی ناشی از سوختگی: یک مطالعه کیفی

Noushin Mousazadeh[1]

۱. استادیار، گروه پرستاری، دانشکده پرستاری آمل، دانشگاه علوم پزشکی مازندران، ساری، ایران

Background and Aim : سوختگی از جمله شدیدترین آسیب¬هایی است که فرد می تواند تجربه نماید تجربه¬ای ویرانگر که تمامی ابعاد زندگی یک فرد را تحت تاثیر قرار می¬دهد. تغییرات روحی-روانی، احساس خجالت، کاهش اعتماد به نفس به دنبال بدشکلی و اختلال پس از سانحه مجموعه¬ای از مشکلات روانی است که فرد را درگیر می نماید. بنابراین مطالعه حاضر با هدف بررسی تجارب روانی-اجتماعی بیماران مبتلا به بدشکلی ناشی از سوختگی انجام شد.

Methods : پژوهش حاضر یک مطالعه کیفی-اکتشافی است که در سال ۱۴۰۱ با رویکرد تحلیل محتوا قراردادی انجام شد. مشارکت کنندگان ۲۵ بیمار دارای بدشکلی ناشی از سوختگی بودند. نمونه گیری در ابتدا به صورت مبتی بر هدف آغاز و به صورت نظری ادامه یافت. تولید داده ها از طریق مصاحبه عمیق نیمه ساختارمند انجام شد. معیار ورود به مطالعه شامل سن بالاتر از ۲۰ سال و وجود بد شکلی ناشی از سوختگی در بدن بود و معیار خروج عدم ابتلا به مشکلات روانی-اجتماعی تشخیص داده شده از زمان قبل از سوختگی بود. نمونه گیری تا زمان اشباع داده¬ها انجام شد. تجزیه و تحلیل داده ها با روش گرانیهم و لاندمن انجام شد.

Results : از تجزیه و تحلیل داده¬ها ۴۵۲ کد اولیه، پنج زیرطبقه، دو طبقه اصلی و یک درونمایه استخراج شد. داغ ننگ درونمایه اصلی با طبقات انگ روانی و انگ اجتماعی بود. تجزیه هویت، اضطراب پس از سانحه و غوطه¬وری در رویا زیرطبقات انگ روانی و بودن در خفقان و زیستن در تباهی از زیرطبقات انگ اجتماعی را تشکیل داده بودند.

Conclusion : افراد دچار سوختگی مبتلا به بدشکلی تجربه روانی-اجتماعی ناخوشایندی از شرایط فعلی خود دارند بنابراین ارائه مراقبت¬ها و مداخلات مناسب در جهت کاهش ننگ در این افراد اهمیت فزاینده¬ای دارد.

Keywords : سوختگی، بدشکلی، ننگ، تیین تجارب

Epidemiology and Clinical outcomes of Pediatric Burns: A 12-Year Retrospective Study in a Burn Center in the North of Iran

Parissa Bagheri Toolaroud[1], Mohammadreza Mobayen [2], Mojdeh Esmailzadeh [3], Alireza Feizkhah [4], Sanaz Masoumi[5], Mahsa Sadeghi Heris[6]

1. Health Information Management Research Center, Kashan University of Medical Sciences, Kashan
2. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
3. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
4. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
6. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Several factors have been reported to directly influence the extent and pattern of burn injury in children. The aim of this study was to report the epidemiology and clinical outcomes of pediatric burns in a burn center in the north of Iran.

Methods : A retrospective, single-center study was conducted of all pediatric burns admitted to the emergency department of a burns center in the north of Iran between March 21, 2011, and March 20, 2022. Demographic and clinical data were collected, analyzed, and compared among groups.

Results : 2,951 pediatric burns, mean aged 5.30±5.27 y, were admitted during the 12 years, with 1777 boys (60.2%) and 1174 girls (39.8%). By age groups, the majority of children (59.7%) were between 0 and 4 years old, followed by 5 to 8 years (15.7%), 13 to 18 years (14.6%), and 9 to 12 years (10.0%), respectively. There were significant differences ($F=8.314$, $P < 0.001$) among ages of different etiologies. The most cause of injury was Hot liquids & vapors (1604, 54.4%). Over half of the cases (53.17%) were in the small areas of less than 10%, and in the large and extra-large areas, there were fewer patients (8.0%). There were significant differences for the TBSA groups in different etiologies ($x2 = 139.640$, $P < 0.001$). There were significant differences among etiology groups for LOS ($F=15.57$, $P < 0.001$), with the longest LOS in Fire & flames burns of 5.63±7.57

days, followed by electrical injury 4.93±8.06 days, chemical burns 4.27±5.99 day, Hot liquids & vapors 3.78±4.93 days, contact burns 3.54±4.82 days. The mortality rate was 1.56%. The mean hospital cost was 45318883.77 ± 1288789.96 IR and 3029337.15 ± 146453.40 IR per % TBSA. There were significant differences among etiology groups for the cost per % TBSA ($F = 15.784$, $P < 0.001$), which correlated with the burn depth, TBSA, etiology, LOS, and age.

Conclusion : Demographic characteristics have to be taken into account when developing strategies for improvements in prevention and treatment. Especially education of parents and the safety of daily tasks are crucial. Special attention and focus on areas of higher incidence should be sought.

Keywords : : Burns, Pediatric, Epidemic research

A 10-year study of epidemiological and clinical characteristics in patients with work-related burn injuries in a tertiary care burn center

Parissa Bagheri Toolaroud[1], Alireza Feizkhah [2], Mohammadreza Mobayen [3]

1. Health Information Management Research Center, Kashan University of Medical Sciences, Kashan
2. Department of Medical Physics, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
3. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : One of the most devastating types of occupational injuries is burns, but there is little knowledge available about their prevalence in Iran. This study aimed to describe the epidemiological and clinical characteristics of work-related burns in a tertiary care burn center in the north of Iran and to contrast these traits with burn injuries that were not caused at work.
Methods : A retrospective, single-center study of work-related burn injuries was conducted in a burns center in the north of Iran between March 21, 2011, and March 20, 2020. The Chi-square, Fisher's exact, and Mann-Whitney U tests were used to compare the groups' differences.
Results : Of 1819 cases treated in the burn center, 398 (21.88%) had work-related burns. The mean age of patients was 38.01 years (SD=12.40). Of the total work-related burns, men accounted for 74.9% (n=1,363). The flame was the most common cause of burns (67.00%). An increase from 7% to 17.10% was observed for electrical burns in the work-related burns group compared to the non-work-related burns group ($P < .001$). The upper limbs were the most frequently burned parts of the body in work-related burns (29.60%). The incidence of amputation and mechanical ventilation was slightly higher in work-related burns.
Conclusion : This study indicated that work-related burns occurred predominantly among young male workers. Flame was the most common cause of burns. This research is the basis for evaluating work-related burns and identifying the causes of these injuries to develop education and prevention programs, especially for young male workers
Keywords : Burns, Work-related burn, Burn unit, Retrospective study

Comparative Effects of Recove® and Nitrofurazone 0.2% on the Treatment of First and Second-Degree Burns: a Double-Blind Randomized Clinical Trial

Parviz Namazi[1], Mohammad Javad Fatemi[2], Parisa Pahlevanpour[3], Hedayat Abbastabar[4], Soheila Naderi Gharahgheshlagh[5]

1. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran.
2. Department of Plastic and Recons- tructive Surgery, Hazrat Fatemeh Hospital, School of Medicine, Iran University of Medical Sciences, Tehran, Iran.
3. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran.
4. Advance Diagnostic Interventional Radiology Research Center, Tehran University of Medical Science, Tehran, Iran
5. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran-Department of Plastic and Recons- tructive Surgery, Hazrat Fatemeh Hospital, School of Medicine, Iran University of Medical Sciences, Tehran, Iran.

Background and Aim : Burns are among the major health challenges of all societies and more than any other trauma incur physical, mental, social, and economic burdens on the patient and society. This study was conducted to assess whether Recove® burn ointment is capable of alleviating the pain, preventing the formation of new blisters and controlling the microbial contamination of the wound

Methods : We, therefore, compared its efficacy to nitrofurazone 0.2% cream. This randomized clinical trial was conducted on individuals who had two burn injuries in their body at the same time in the Motahari Burn Hospital, Tehran Province, from June to October 2016. Sampling was carried out with a non-random method using available samples. The intervention in experimental and control groups was Recove® and nitrofurazone, respectively. The effect of interventions on pain relief, the formation of new blisters and prevention of infection at the burn wound were evaluated. In our double- blind study, blindness was applied to the patients and the person evaluating the outcomes

Results : Both Recove® and nitrofurazone interventions significantly alleviated pain ($P < 0.01$), but Recove ®showed more effectiveness ($P=0.01$). Similarly, in terms of new blister formation, the experimental group receiving Recove® showed less new blister formation over 24 hours after treatment compared to nitrofurazone group ($P=0.03$) and with respect to antimicrobial activity, there was no significant difference between Recove® and nitrofurazone ($P=0.12$).

Conclusion : Recove® was effective on pain reduction, prevention of new blisters formation as well as infection. Therefore, it seems that Recove® could be considered as a new and efficient treatment for burn.

Keywords : Burn; Recove® burn ointment; Nitrofurazone cream; Pain; Blister

تجربه زیسته پرستاران و بیماران مرکز سوختگی رحیمی قم پیرامون اسکار در ناحیه صورت: یک مطالعه پدیدارشناختی

Reza Heidarifar[۱], fateme bagheri[۲], hoda heyatzadeh[۳], azam kermani[۴]

۱. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۲. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۳. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۴. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران

Background and Aim : آسیب های ناشی از سوختگی یکی از چالش های مهم سیستم جهانی بهداشت می باشد که در کشورهای کم درآمد و در حال توسعه به صورت جدی تر باعث تحمیل بار اجتماعی و روانی می شود،

Methods : مطالعهٔ حاضر، مطالعه ای کیفی از نوع پدیدارشناسی است که اطلاعات آن از طریق نمونه¬گیری مبتنی بر هدف و ۱۵ جلسه مصاحبه عمیق و نیمه ساختاریافته فردی با ۱۰ بیمار سوخته و ۵ پرستار سوختگی در مرکز سوانح و سوختگی رحیمی بیمارستان نکویی قم در سال ۱۴۰۰ جمع آوری شد. داده ها بعد از ۱۶ مصاحبه به نقطه اشباع رسید. تحلیل داده ها از طریق روش تحلیل محتوای گرینهایم-لاندمن صورت گرفت که پس از پیاده کردن مصاحبه های ضبط شده روی کاغذ و غوطه وری در تحلیل داده ها کدهای اولیه استخراج شد. جهت تعیین طبقات اصلی، کدهای اولیه در چند مرحله بازبینی، بررسی و طبقه بندی شد.

Results : تجربه زیسته پرستاران و بیماران بخش سوختگی در خصوص اسکار بعد از سوختگی در ناحیه صورت در ۴ درونمایه پدیدار گشت که شامل: ۱-عوامل فردی۲ – عوامل اقتصادی-فرهنگی ۳- عوامل اجتماعی ۴- عوامل روانی بود. هر یک از این طبقات دارای طبقات فرعی خاص با ویژگی‌ها و کارکرد اختصاصی و موقعیتی بودند. در بعد فردی محدودیت های حرکتی اعمال شده است . در بعد اقتصادی-فرهنگی، چهار زیر طبقه اقتصادی ، اجتماعی، فرهنگی و سبک زندگی، مطرح گردید . در بعد عوامل اجتماعی روابط زناشویی و باروری و در بعد روانی سه زیر طبقه اعتماد به نفس، انزوا، حس ترحم ذکر گردیدند.

Conclusion : نتایج حاصل از این مطالعه بر اهمیت شناخت مشکلات ناشی از افرادی که دچار سوختگی در ناحیه صورت و قفسه سینه شده اند و همچنین توجه خانواده ها، افراد جامعه و متولیان امر در حمایت از این عزیزان تاکید دارد

Keywords : پرستاران و بیماران سوختگی، اسکار، تجربه زیسته

بررسی اسکار در ناحیه صورت در بیماران دچار سوختگی در سال ۱۴۰۰

Reza Heidarifar[۱], roghaye ahangari[۲], javad hakimelahi[۳], fateme asgari[۴], alireza etminani[۵]

۱. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۲. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۳. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۴. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۵. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران

Background and Aim : اسکار یکی از عوارض بعد از سوختگی و جراحی ترمیمی می باشد. اسکارهایی که در ناحیه صورت و قفسه سینه خصوصا در خانم ها به جا می ماند بسیار ناراحت کننده می باشد. هدف از این مطالعه تعداد اسکار به جا مانده در ناحیه صورت در بیمارانی که دچار سوختگی شده¬اند می¬باشد.

Methods : : در این مطالعه که با رویکرد توصیفی-کاربردی انجام شده است تمامی پرونده بیمارانی که از فروردین ۱۴۰۰ تا اسفند همان سال مورد بررسی قرار گرفت و از بین آنها پرونده های مربوط به سوختگی در ناحیه صورت، تنه فوقانی و گردن استخراج گردید. اطلاعات مربوط بررسی و مورد آنالیز قرار گرفت.

Results : نتایج مطالعه نشان داد در سال ۱۴۰۰ تعداد ۶۶۳ نفر دچار سوختگی در ناحیه صورت(۱۴۹)، تنه(۲۵۲) و گردن و پس سر(۲۶۲) به مرکز رحیمی بیمارستان خیرین سلامت قم مراجعه کرده اند. که از این تعداد ۲۷ درصد خانم بوده اند. سوختگی در ناحیه صورت در خانم ها ۳۴ مورد بوده است که چهار نفر از این آمار نیازمند بررسی طولانی در بخش داشته اند. هفت نفر از خانم هایی که دچار سوختگی در ناحیه صورت داشته اند دچار اسکار پس از سوختگی شده اند و به مراکز مجهزتر جهت انجام جراحی ترمیمی مراجعه کرده اند. این آمار در سوختگی گردن و تنه در خانم ها ۵۱ و ۹۸ نفر بوده است که از این تعداد به ترتیب ۱۱ و ۱۹ دچار اسکارهای شدید شده و نیازمند جراحی ترمیمی بوده اند. بیشترین عامل سوختگی در ناحیه تنه و صورت آب جوش گزارش شده است (۸۳ درصد)

Conclusion : با درنظر گرفتن آسیب های سوختگی در خانم هایی که در ناحیه سر، صورت و گردن دچار آسیب شده اند به نظر می رسد با انجام مطالعات میدانی و بررسی دقیق عامل سوختگی و حذف آن می¬توان اسکار را تا مقدار قابل توجهی کاهش داد.

Keywords : سوختگی، اسکار، ترمیمی

موانع بهبود اسکار در سوختگی: یک مطالعه گراندد‌تئوری

Reza Heidarifar[۱], roghaye ahangari[۲], hoda heyatzadeh[۳], azam kermani[۴], FATEME bagheri[۵], jafar shahi[۶]

۱. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۲. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۳. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۴. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۵. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران
۶. واحد توسعه تحقیقات بالینی مجتمع خیرین سلامت، دانشگاه علوم پزشکی قم، قم، ایران

Background and Aim : عوارض بعد از سوختگی در کشورهای در حال توسعه و کم درآمد شدیدتر بوده و ناتوانی بوجود آمده از آن غم¬انگیز می¬باشد. اسکارها یکی از این موارد می¬باشند. هدف از این مطالعه موانع بهبود اسکار در بیمارانی که دچار سوختگی در ناحیه صورت شده¬اند می¬باشد.

Methods : در این مطالعه که با رویکرد کیفی انجام شده است ۲۵ مشارکت کننده؛ شامل ۱۰ پرستار، ۳ پزشک متخصص، ۶ بیمار و ۴ عضو از اعضای خانواده بیماران در بیمارستان آموزشی قم در سال ۱۴۰۰ طی نمونه گیری مبتنی بر هدف و نمونه گیری نظری مورد مصاحبه با سئوالات باز قرار گرفته اند. مشارکت کنندگان دیدگاه های خود را پیرامون سوالات مورد بررسی به بحث گذاشتند، تا اشباع داده ها حاصل شد، مکالمات به صورت دیجیتالی ضبط و بلافاصله کلمه به کلمه مورد نگارش قرار گرفت. و در نهایت آنالیز داده ها انجام شد

Results : طیف گسترده ای از موانع بهبود اسکار توسط پرستاران، بیماران و پزشکان مطرح شد. پس از دسته بندی موضوعی، چهار حیطه اصلی شناسایی شد: حیطه اقتصادی شامل دو زیر گروه اصلی هزینه های درمان وعدم تکفل بیمه های درمانی حیطه اجتماعی شامل عدم اطمینان به پزشک با توجه به تجربیات بیماران قبلی و سایر اطرافیان حیطه پزشکی طولانی بودن پورسه درمانی و انتخاب بعضا نامناسب نوع جراحی ترمیمی حیطه آموزشی شامل عدم آموزش های مناسب و لازم به بیماران، بعد از سوختگی، قبل از جراحی ترمیمی و بعد از جراحی ترمیمی

Conclusion : با توجه به اهمیت از بین بردن اسکار در بیماران سوختگی به نظر می رسد با شناخت کامل موانع و همچنین ایجاد بستر مناسب جهت از بین بردن چالش های پیش رو می توان گامی بلند در جهت رفع موانع بهبود اسکار در سوختگی برداشته شود که نیازمند پوشش بهتر بیمه در این جراحی می باشد

Keywords : پرستاران و بیماران سوختگی، اسکار، موانع

بررسی شیوع و روش های درمان اسکار هایپرتروفیک در بیماران سوختگی

Saeedeh Najafikersami[۱], نجیبه محسنی معلم کلائی[۲], مرتضی مرادیان[۳], سید جواد جمالی گلنشینی[۴]

۱. کارشناس ارشد مدیریت خدمات بهداشتی و درمانی، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد، مرکز روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران، ساری، ایران
۲. کارشناس ارشد فناوری اطلاعات سلامت، مرکز تحقیقات روان پزشکی و علوم رفتاری، پژوهشکده اعتیاد، مرکز روانپزشکی و سوختگی زارع ، دانشگاه علوم پزشکی مازندران، ساری، ایران
۳. کارشناس پرستاری، بیمارستان روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران، ساری، ایران
۴. کاردان رادیولوژی، بیمارستان روانپزشکی و سوختگی زارع، دانشگاه علوم پزشکی مازندران، ساری، ایران

Background and Aim : اسکار هایپرتروفیک یکی از بزرگترین معضلات در بیماران سوخته پس از بهبودی می باشد. که در نتیجه تکثیر بیش از حد میوفیبروبلاست ها و افزایش رسوب کلاژن ایجاد می شود. ایجاد اسکار حیات بیمار را تهدید نمی کند، ولی می تواند مشکلاتی از نظر زیبایی برای بیمار ایجاد کنند. برای بر طرف کردن اسکار ناشی از سوختگی گاهی بیمار باید برای سال ها اعمال جراحی متعددی انجام دهد. هدف از انجام این مطالعه بررسی شیوع و روش های درمان اسکار هایپرتروفیک در بیماران سوختگی به روش مروری می باشد

Methods : مطالعه حاضر از نوع مروری است که با استفاده از پایگاه های اطلاعاتی ISI, Pubmed و Sci-ence Direct و منابع فارسیIranmedex, SID و Magiran انجام شده است. جستجو در این پایگاه ها با استفاده از کلمات کلیدی اسکار هایپرتروفیک(Hypertrophic scar)، بیماران سوختگی (Burn patient)، درمان اسکار (Scar management) انجام شد. از بین مطالعاتی که طی سال های ۲۰۰۲ تا ۲۰۲۲ منتشر شده بود، ۶۰ مقاله استخراج شده است. درنهایت ۳۰ مقاله در راستای اهداف پژوهشگران مورد بررسی قرار گرفت

Results : بـدنبال انجـام درمان هـای اولیه و نجات بیماران سوختگی در مرحله حاد، مشکلی که گریبان گیر این افراد می شود، بجا ماندن آثار سوختگی و بروز بدشکلی ناشـی از ایجاد اسکار سوختگی می باشد. عوامل خطر بروز اسکار سوختگی شامل پوست تیره، جنسیت (در زن ها بیشتر) ، جوانی سن ، محل سوختگی (گردن و اندام فوقانی) ، جراحی های متعدد، مدت زمان بهبودی و شدت سوختگی می باشند. به منظور درمان اسکار هایپرتروفیک، یکسری روش های غیر تهاجمی و تهاجمی در دسترس است، از جمله این روش ها ژل سیلیکونی، پوشش های فشاری، تیشو اکسپندر، برداشتن جراحی، رادیوتراپی، کرایوتراپی، لیزرتراپی، فتوترمولیز و تزریقات اینترفرون می باشد

Conclusion : می توان با استفاده از روش های مختلف، بازسازی لازم را برای بیماران دچار اسکار سوختگی به گونه ای انجـام داد کـه شـکل و ظاهر ناحیه آسیب دیده تا حـد امکـان بـه حالـت اول نزدیـک گردد و از نظر عملکردی نیز قابل قبول باشد. پیشرفت مراقبت های بالینی همراه با درک بهتر پاتوفیزیولوژی اسکار های هایپرتروفیک، مدیریت بیماران سوختگی را در آینده بهبود می بخشد.

Keywords : اسکار هایپرتروفیک، سوختگی، درمان اسکار

معرفی نظام ثبت بیماران سوخته بستری شده در مرکز آموزشی درمانی امام موسی کاظم ع

Seyed abdulah Ahmadi[۱], Soraya Sarhangpour[۲], Malihe Yazdani[۳]

1. Imam Musakazem(AS) Hospital, Isfahan University of Medical Sciences, Isfahan,Iran
2. Elmam Musakazem(AS) Hospital, Isfahan University of Medical Sciences, Isfahan,Iran
3. Imam Musakazem(AS) Hospital, Isfahan University of Medical Sciences, Isfahan,Iran

۱ : **Background and Aim**) با توجه به اهمیت ثبت بیماریها و اطلاعات ذی قیمتی که از سیستم ثبت به دست می آید، تصمیم به راه اندازی سیستم ثبت بیماران سوختگی گرفته شد. در سیستم ثبت بیماران سوختگی علاوه بر جمع آوری اطلاعات بیماران، بستر مناسب و پایگاه اطلاعات جامعی را برای پژوهش در زمینه سوختگی فراهم می¬نماییم.

۲ : **Methods**) پس از تصویب برنامه ثبت بیماران سوختگی نسبت به تشکیل تیم راهبری ثبت و کمیته های آمار، ارزیابی کیفیت داده ها، کمیته جمع آوری و ثبت داده ها و همچنین کمیته تهیه فرمها و اصلاح آنها، دو واحد IT و ارزیابی خارجی اقدام گردید. فرم های جمع آوری اطلاعات توسط کارشناسان و متخصصین پزشکی طراحی و روایی و پایایی آن توسط کمیته آمار تایید شد.

۳ : **Results**) زیر ساختهای لازم نرم افزاری وسخت افزاری تهیه و اعتبارسنجی آنها انجام شد. آموزش پرسشگران درخصوص سوالات پرسشنامه، نحوه تکمیل پرسشنامه و حفظ محرمانگی اطلاعات انجام خواهد شد. اطلاعات توسط پرسشگران جمع آوری گردید. کلیه اطلاعات از لحاظ صحت وکیفیت بررسی، و سپس ورود اطلاعات انجام شد. هر سه ماه یک بار گزارشات پیشرفت کار ارائه می شود.

Conclusion : درصورت پیاده سازی این رجیستری به صورت ملی می تواند به عنوان ابزاری برای رصد و پایش وضعیت این بیماری درجامعه مورد استفاده قرارگیرد و راهنمایی برای مسئولین حوزه سلامت جهت اتخاذ تصمیم وسیاستگذاری مناسب در راستای پیشگیری این بیماری درکشور باشد.

Keywords : Registry, burn. Imam musakazem hospital

بررسی فراوانی معلولیت جسمی حرکتی، مشکلات تغذیه ای و بیماری های زمینه ای قبلی در کودکان دچار سوختگی در سال ۱۳۹۷ در بخش سوختگی بیمارستان امام رضا

Seyed Hassan Tavousi[1], Majid Khadem-Rezayian[2], Amir Kouchaki[3], Zahra Ashuri[4]

1. Surgical oncology research center.mashhad university of medical sciences.Mashhad .IRAN
2. Assisstant professor of community education medicine.Mashhad University of Medical Sciences. Mashhad .IRAN
3. Burn and reconstructive department of Imam Reza Hospital. Mashhad university of medical sciences .Mashhad .IRAN
4. Burn and reconstructive department of Imam Reza Hospital. Mashhad university of medical sciences .Mashhad .IRAN

Background and Aim : هدف مطالعه حاضر بررسی فراوانی معلولیت های جسمی حرکتی، مشکلات تغذیه ای و بیماری های زمینه ای در کودکان دچار سوختگی مراجعه کننده به بخش سوختگی بیمارستان امام رضا دانشگاه علوم پزشکی مشهد بود.

Methods : روش اجرا و مواد مورد استفاده: پژوهش حاضر یک مطالعه توصیفی-تحلیلی و از نوع مقطعی بود که به صورت گذشته نگر در بخش سوختگی بیمارستان امام رضا (ع) مشهد انجام شد و کودکان بستری شده با تشخیص سوختگی حاد در سال ۱۳۹۷ را بررسی کرد. سپس بیماران زیر ۱۲ سال وارد مطالعه شدند. با مراجعه به پرونده بیمارانی که اسامی آن ها استخراج شده بود، داده های لازم جمع آوری و در چک لیست از قبل تهیه شده ای ثبت گردید. برای بدست آوردن این داده ها از فرم مخصوص شرح حال سوختگی مندرج در پرونده های سوختگی و شرح حال ها و گزارش های پرستاری استفاده گردید و در صورت نقص، اطلاعات با تماس تلفنی با والدین کودک تکمیل می گردید. در نهایت اطلاعات بدست آمده وارد نرم افزار آماری SPSS نسخه ۱۷ شده و آنالیز شدند.

Results : مجموعا ۲۵۲ بیمار با میانگین سنی ۳,۳۲±۳,۲۲ سال وارد مطالعه شدند که ۸۱ نفر (۳۸,۲ درصد) از آنان مونث و مابقی مذکر بودند. ۷,۹ درصد از بیماران سابقه تشنج داشتند و سابقه زردی نیز ۶,۷ درصد آن ها وجود داشت. همچنین بیماری های نادری شامل سیستیک فیبروزیس، سندرم داون و بیماری های مادرزادی قلب نیز در ۰.۸ درصد، ۱,۶ درصد و ۰,۸ درصد از بیماران وارد شده در مطالعه وجود داشتند. فلج حرکتی و آمپوتاسیون به ترتیب در ۱۸ (۷,۲ درصد) و ۵ (۲ درصد) نفر از بیماران وجود داشتند. از بین بیماران وارد شده در مطالعه ۳ بیمار (۱,۶ درصد) سوء تغذیه داشتند

Conclusion : نزدیک یک سوم بیماران دچار بیماری های زمینه ای بودند. بیش از ۷ درصد بیماران به فلج حرکتی مبتلا بودند و آمپوتاسیون اندام نیز در ۲ درصد وجود داشت. سوء تغذیه در بیش از ۱ درصد بیماران وجود داشت. سن بیماران فوت شده به صورت معناداری کمتر از بیماران ترخیص شده بود و ABSI آنان به صورت معناداری بیشتر از بیماران زنده بود. همچنین از ۳ بیمار فوت شده یک نفر سابقه آمپوتاسیون داشت

Keywords : سوختگی، اطفال، سوء تغذیه، معلولیت جسمی حرکتی

In vitro study of antibacterial hydrogels in wound healing of full skin thickness

Seyedeh Sara Hashemi[1], Behnam Eyzadi[2], Aliakbar Mohammadi[3], Abdolkhalegh Keshavarzi[4], Mojtaba Mortazavi[5]

1. Burn and Wound Healing Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
2. Division of Plastic and Reconstructive Surgery, Department of Surgery, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
4. Burn and Wound Healing Research Center, Amiralmomenin Hospital, Shiraz University of Medical Sciences, Shiraz, Iran
5. Department of Biotechnology, Institute of Science and High Technology and Environmental Sciences, Graduate University of Advanced Technology, Kerman, Iran

Background and Aim : Wound healing is a complex and dynamic process. With the advancement of technology, more than 1000 types of modern wound dressings have been developed. Wound dressings are made either from natural materials or from synthetic and chemical materials. Modern wound dressings, in addition to their protective and protective roles, have chemical and physical interactions with the wound bed. They carry antibiotics, drugs, and nanoparticles and play an important role in maintaining moisture or moisturizing the wound, all of which can facilitate the wound-healing process.
Methods : In this study, the effect of alginate and PVA hydrogels along with titanium dioxide nanocomposite on the wound healing process in a rat model was investigated. Wounds were created in different groups of mice and the mice were treated daily from the day of wound formation. Photographs were taken from the wound area on days 3, 7, 10, and 14, and the changes in the wound area were compared to the original wound. Skin sampling was performed on days 3, 7, 10, and 14, and tissue sections were prepared and stained and the data was entered and analyzed in Prism Pad Graph statistical software. The results were reported as the mean standard deviation in all analysis values of $P \geq 0.05$ were selected as the level of statistically significant difference
Results : According to the results, the rate of shrinkage of wounds treated with titanium dioxide nanocomposite was higher than the study, control, and hydrogel groups without nanoparticles.
Conclusion : We found out the effectiveness of this antibacterial hydrogel.
Keywords : Wound healing, Alginate and PVA hydrogels, Antibacterial

Xanthan gum hydrogel improves wound healing in a rat model of excision injury

Seyyedeh Sahra Mirmasoudi[1], Mohammadreza Mobayen[2], Amaneh Mohammadi Roushandeh[3], Mohsen Shahrousvand[4], Zahra Pourmohammadi-Bejarpasi[5], Alireza Feizkhah[6]

1. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
2. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
3. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
4. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
6. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Skin wounds are a significant public health issue due to the lack of real effective remedies. Hydrogel dressings are used for wounds with low and medium secretions due to swelling due to the absorption of wound secretions because they may moisten the surrounding tissues due to their inability to absorb a large volume of secretions. On the other hand, the use of xanthan gum does not stick to the wound.

Methods : In this work, a novel hydrogel based on xanthan Gum was prepared as a wound dressing and examined in a rat excisional wound model. This Hydrogel is prepared by free radical polymerization using potassium persulfate (KPS) as an initiator, N, N-methylene bisacrylamide (MBA) as a crosslinker, and poly acrylic acid (PAA) as a monomer in the presence of Xanthan gum. Analyses such as SEM, FT-IR, XRD, and TGA were used to study morphology structure. After choosing the optimal sample, the swelling and release test and animal studies were done. The results showed that the acrylic acid monomer had higher swelling and controlled release. Finally, the wound-healing efficacy of the xanthan gum was evaluated in an excision wound model in rats.

Results : The in vitro results exhibited that the acrylic acid monomer had higher

swelling and controlled release. The prepared hydrogels had biocompatibility, acceptable mechanical properties, sustained release, capacity to absorb wound exudate, and non-toxicity of Hydrogel. In vivo, the Hydrogel effectively accelerated wound contraction and promoted wound healing compared to controls.
Conclusion : in conclusion, Although further investigations, including preclinical and clinical studies, are required, our findings strongly suggest that Hydrogel might be considered a potential novel wound dressing for the healing of various wounds.
Keywords : wound dressing, Xanthan gum, poly acrylic acid, Hydrogel

Hypodermoclysis (HDC) در بیماران لاغر و بیماران با مراقبت طولانی مدت

Shahram Khamissi[1]

۱. کارشناس ارشد آموزش پرستاری – بیمارستان سوانح و سوختگی آیت ا... طالقانی(ره) اهواز

Background and Aim : کلایزیس زیر جلدی یک روش برای تجویز مایعات و دارو ها از طریق زیر جلدی است . بر خلاف تزریقات روتین عضلانی و وریدی ، این روش میتواند یک گزینه با دوام برای رساندن بسیاری از مایعات و داروها در افراد ناتوان در دریافت مایعات خوراکی یا در افرادی که وریدهای مناسبی ندارند ، باشد . مزایای تجویز زیر جلدی شامل درد کمتر بخاطر وجود گیرنده های کمتر در زیر پوست ، اریگیشن مناسب و فعالیت پروتئولیتیک کمتر باشد .در دهیدراتاسیون خفیف تا متوسط HDC روش نسبتا قابل قبول برای رساندن مایعات بویژه در زمانی که سایر روشها غیر موثر یا در دسترس نباشند ، میباشد .در بیماران دچار سوختگی روش subeschar clysis روشی برای درمان سوختگی های عمیق است . در این روش میتوان داروهای مختلفی در زیر بافت اسلاف تزریق و در درمان سوختگی بکار برد .پوویدون یوداین ، نئوسپورین ،پیپراسیلین ، نرمال سالین از جمله داروهایی هستند که در clysis مورد استفاده قرار میگیرند .

Methods : این پژوهش یک مطالعه مروری است به منظور یافتن منابع اطلاعاتی مورد نظر جستجوی اینترنتی در موتور جستجوی گوگل و پایگاههای اطلاعاتی خارجی Google schol- ، pubmed، Elsevier ar و medscape صورت گرفت . پس از گردآوری منابع مرتبط بازیابی شده ، روشهای رساندن دارو و مایعات به بیمارانی که دارای وریدهای نامناسب بوده و یا لاغر و نحیف هستند ، بررسی و مطالعه شد .

Results : در یک مطالعه که بر رروی ۶۱۳ بیمار دچار سوختگی عمیق انجام شد ،پوویدون یوداین ۰,۲۵٪ همراه با نئوسپورین بصورت زیر جلدی تزریق شد . بیماران در روز هفتم تا هشتم پایش شدند. میزان بروز عفونت با استافیلوکوک طلایی و پسودوموناس آئروژینوزا با P< بنحو موثری کاهش یافته بود .۰,۰۰۱

Conclusion : روش clysis ، روشی کم عارضه و کم خطر جهت رساندن مایعات و داروها به بیماران لاغر، نحیف و بیماران سوختگی است .این روش در بیماران دچار سوختگی های عمیق و عمدتا درجه سه میتواند روشی برای درمان زخم وکاهش خطر عفونت زخم باشد .

Keywords : مایعات،کلایزیس، پوویدون یوداین ، سوختگی ، عفونت

Evaluation of Factors Related to Acute Kidney Injury in Patients with Severe Burns admitted to Burn Intensive Care Unit

Sheyda Rimaz[1], Rimaz Siamak[2], Mobayen Mohammad Reza[3], Ashraf Ali[4], Roshanfar Sajjad[5], Rimaz Sheyda [6], Eslami kenarsari Habib[7]

-

2. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
3. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
4. Clinical Research Development Unit of Poursina Hospital, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
6. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
7. Clinical Research Development Unit of Poursina Hospital, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Acute kidney injury (AKI) is one of the most common complications of severe burns and affects the prognosis of patients. In this study, we aimed evaluation of factors related to acute kidney injury in patients with severe burns admitted to the burn intensive care unit.

Methods : This analytical cross-sectional study was performed on burn patients with ≥ 20% total body surface area (TBSA %) who were admitted to Velayat burn hospital between March 2016 and November 2020. Patients with a history of chronic renal failure, patients admitted after >72 h from the time of the burn incident, and those who died within the first 24 hours of hospitalization were excluded from the study. Demographic, laboratory, and clinical information was collected. KDIGO criteria defined early AKI in the first 5 days of hospitalization. The collected data was entered into SPSS software version 22 with a significance level of 0.05.

Results : Of the 194 patients included, the mean age of the subjects was 42.99±17.58. 138 patients (71.1٪) were male. The mean TBSA% was 49.18±24.71. According to KDIGO criteria, 43 patients (22.2٪) developed early AKI during the first 5 days of hospitalization as follows: Stage I AKI, 24 patients (12.4٪), Stage II AKI, 14 patients (7.2٪) Stage III AKI, 5 patients (2.6٪). 85 patients (43.8٪) died. Mortality in patients with early AKI (76.7٪) was significantly higher than in pa-

tients without early AKI (34.4٪). Patients with AKI had higher age, more mechanical ventilation days, higher Baux scores, higher modified Baux scores, more prolonged ICU stays, and sepsis (P< 0.001). Multivariable logistic regression demonstrated the association between AKI and the following variables: gender (OR = 2.872, p = 0.032), age (OR = 1.047, p = 0.000), TBSA %> 60٪ (OR = 6.134, p = 0.001) are independent risk factors for developing early AKI. Our study also showed that TBSA% significantly increases the severity of AKI.

Conclusion : The results of this study showed that AKI is common in patients with a major burn injury. Age, gender and TBSA% are the strongest independent predictors of early AKI. The results of this study can help to implement targeted therapies.

Keywords : AKI, burn patients,KDIGO,Burn ICU

Evaluation of Changes in Base Deficit, Serum Albumin Level and CRP to Alb ratio and Relation with Prognosis in Severe Burn Patients Admitted to the Velayat Burn Intensive Care Unit

Siamak Rimaz[1], Abbas Sedighinejad[2], Mohammadreza Mobayen[3], Ali Shabak[4], Sheyda Rimaz[5]

1. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
2. Anesthesiology Research Center, Department of Anesthesiology , Alzahra Hospital , Guilan University
3. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
4. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Despite post-burn resuscitation and wound treatment advancements, patients with severe burn injuries are commonly accompanied by sepsis, ARDS, and organ dysfunction. Thus, early sepsis prediction and relevant intervention are critically important for improving outcomes in severe burns. This study investigated the predictive role of base deficit, serum albumin level, and CRP/Alb ratios for prognosis of outcome in burn patients admitted to the velayat burn intensive care unit in 2018-2021.

Methods : The current study was conducted on burn patients between 16-70 years and TBSA between 20 and 80% who were hospitalized in the burn ICU from April 2018 to April 2021. According to the Severity of TBSA percentage, the patients were divided into three groups. Patients' demographic data and level of serum Alb, Base Deficit, CRP/Alb ratio was determined in the 1st, 3rd, 5th, and 7th days of hospital days. A P values of less than 0.05 determined the statistically significant. The analyses were performed using SPSS software, version 22.

Results : Totally, 195 patients (83% male, mean age 39.81 ± 14.23years, and TBSA 35.83± 19.1%) were included in the study. Significant differences were observed in the average percentage of burn ICU Stay days, Alb, CRP, Base deficit, and CRP/Alb ratio between survived and non-survived groups (P<0.001). Changes in serum Alb, CRP, Base Deficit levels, and CRP/Alb ratio were analyzed at each marker for each group (TBSA 20%-39%, n= 134; TBSA 40%-59%, n = 28; TBSA 60-80, n=

33). There was a correlation between TBSA and the above serum markers. The mean serum Albumin level decreased, and the mean CRP, Base Deficit levels, and CRP/Albumin ratio increased with increasing the percentage of burns (P<0.05). Multivariable logistic regression demonstrated with the decrease in the serum Albumin level and increase in CRP/Albumin ratio, the patients' mortality rate increased, and the correlation was statistically significant (P <0.05).

Conclusion : Decrease in serum albumin and increase in CRP/Albumin ratio frequently developed in patients with massive burn injuries, which can lead to several physiological alterations in cellular function and correlate with burn patient outcomes. The systematic use of these indexes could help to identify those patients with higher risk.

Keywords : Burn, Albumin, CRP/Albumin ratio, Prognosis

Value of hours: An insight from increased mortality in burn center with first-grade accreditation

Simin Zarimeidani[1], mahmood omranifard[2], fatemeh jafari[3], ehsaneh najari ardestani[4]

1. Imam Musa Kazem (AS) Hospital, Isfahan University of Medical Sciences, Isfahan, Iran
2. Department of Plastic Surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.
3. Imam MusaKazem (AS) Hospital, Isfahan University of Medical Sciences, Isfahan, Iran
4. Imam MusaKazem (AS) Hospital, Isfahan University of Medical Sciences, Isfahan, Iran

Background and Aim : Major burn injury is a type of trauma with high morbidity and mortality rates in all age groups. Despite recent advances in burn management and improvements in burn outcomes, data in our burn center reveal mortality rates are consistently high. Therefore, a comprehensive investigation of burn patients' mortality stratified by all relevant components, and specialty total hours from injury to transfer was required. This study aimed to report the spectrum of those variables that find along precisely evaluated in burn patient mortality data and provide key tips to reduce mortality rates.

Methods : A retrospective observational study was carried out over two years for acute burn victims admitted to the Imam MusaKazem (AS) Hospital a specialized burn center. All available medical records were examined and the following 17 variables were scrutinized and analyzed.

Results : The death rate was 28.5% during these 2 years. The highest rate was observed for men and among children. The mean TBSA was 69.07%. The most common cause of fatal burns was flame (91.0%). 83% of burn cases were accidental and 16% were suicides. 54.1% of the transferred patients transferred from other provinces and 45.9% transferred from Isfahan province. In all the deceased patients who passed away more than 6 hours from the time of injury to arriving at the burn center (80.9%), at least one complication was observed at the time of admission. One out of three patients was transported by private ambulance. The most common cause of death was sepsis (54.3%).

Conclusion : In our hospital, one out of four burn patients die. More than three-quarters of patients were transferred after more than 6 hours from the time of injury and at least one complication at the time of admission. Therefore, any extra hours spent early in the post-injury period can be valuable. In this study, the basics of developing equal referral guidelines across the country have been suggested.

Keywords : burns, mortality rate, patient transfer

The Effect of Rainbow trout (Onchorhynchus mykiss) collagen incorporated with exopolysaccharides derived from Rhodotorula mucilaginosa sp. on burn healing

Soheila Naderi Gharahgheshlagh[1], Tayyeb Ghadimi [2], Noorahmad Latifi [3], Seyed Mohammad Amin Haramshahi [4], Ghazaleh Larijani [5], Fatemeh Latifi [6], Fatemeh Ghadimi[7], Masoud Hamidi [8], Saeed Nezari[9]

1. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran
2. Burn Research Center, Iran University of Medical Sciences, Tehran, Iran
3. Department of Plastic and Reconstructive surgery, Hazrat Fatemeh Hospital, School of Medicine, Iran University of Medical Sciences, Tehran, Iran
4. Institutes of Regenerative Medicine, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences, Tehran, Iran.
5. Cellular and Molecular Research Center, Iran University of Medical Sciences, Tehran, Iran.
6. Department of Oral and Maxillofacial Surgery, Dental School, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
7. Faculty of Medicine, Iran University of Medical Sciences, Tehran, Iran.
8. Department of Medical Biotechnology, Faculty of Paramedicine, Guilan University of Medical Sciences, Rasht, Iran.
9. Department of Plastic and Reconstructive surgery, Hazrat Fatemeh Hospital, School of Medicine, Iran University of Medical Sciences, Tehran, Iran

Background and Aim : Burns are one of physically the debilitating injuries could be potentially fatal, therefore, providing appropriate coverage in order to reduce possible mortality risk and accelerate wound healing is mandatory.
Methods : In this study, collagen/exopolysaccharide (Col/EPS 1-3%) scaffolds were synthesized from Rainbow trout (Oncorhynchus mykiss) skin's incorporated with Rhodotorula mucilaginosa sp. GUMS16, respectively, for promoting Grade 3 burn wound healing. In this regard, physicochemical characterizations and consequently, biological properties of the Col/EPS scaffolds were tested.
Results : The results showed the presence of EPS did not affect the minimum porosity dimensions while raising the EPS amount significantly reduced the maximum porosity dimensions. TGA, FTIR spectroscopy, and tensile properties results confirmed the successful incorporation of the EPS into Col scaffolds. Furthermore, the biological results showed the increasing EPS did not affect Col biodegradability, cell viability and the use of Col/EPS 1% on the rat models dis-

played a faster healing rate. Finally, histopathological examination revealed the Col/EPS 1% treatment accelerated wound healing, through the greater re-epithelialization and dermal remodeling, more abundant fibroblast cells and Col accumulation.

Conclusion : Our finding suggested that Col/EPS 1% promotes dermal wound healing via antioxidant and anti-inflammatory activities which it can be a potential medical process in the treatment of burn wounds.

Keywords : Rainbow trout, collagen, exopolysaccharide, burn healing.

Effects of burns on self-esteem and satisfaction with body appearance in patients: a systematic review study

Tahereh Yaghoubi[1], Hadith Javadian Kutenai [2], Najibeh Mohseni Moalemkolae[3]

1. Assistant Professor, Department of Nursing, Traditional and Complementary Medicine Research Center, Addiction Institute, Mazandaran University of Medical Sciences, Sari, Iran
2. Master of Critical Care Nursing, Mazandaran University of Medical Sciences, Sari, Iran
3. - MSc in Health information technology, Psychiatry and Behavioral Sciences Research Center, Addiction Research Institute, Mazandaran University of Medical Sciences, Sari, Iran

Background and Aim : Burns are caused by exposure of skin layers to thermal, electrical, chemical or radiation factors. Burns are acute, unpredictable and destructive forms of trauma that affect the physical and mental health of the victim. Burn scars often result in disfigurement, potentially resulting in altered body image, lack of effective social functioning, and poor quality of life for the patient. This review study was conducted with the aim of investigating the effect of burns on satisfaction with appearance and self-esteem in burn patients

Methods : to find evidence related to the purpose of the study, in national databases (SID, Magiran, IranMedex and Irandoc) and international databases (Google-Scholar, Medline, PubMed, Elsevier, ProQuest, Springer) using keywords Mesh (self-esteem, satisfaction with appearance, burnout), was searched from 1990 to 2021. But the Embais database was not examined due to lack of access to data

Results : The search process led to the identification of 862 articles in the present review. After removing duplicate studies and during initial screening, studies were reviewed in terms of title, abstract, inclusion and exclusion criteria. Accordingly, 840 articles were excluded after initial screening. During the secondary screening, 18 studies were reviewed in terms of full text. Details on the selection of studies are provided in the PRISMA flow chart

Conclusion : In the process of treating and caring for burns, patients' self-esteem and body image are generally negatively affected by burns. Burn survivors who experience social support, especially from friends, have a more positive body image, higher self-esteem, and less depression. With the passage of time of 2 to 5 years, burn patients cope with their appearance problems and their satisfaction with their appearance and self-esteem improves. Studies have also shown that interventions such as (yoga, burn exercises, and self-care training) improve self-esteem and appearance satisfaction in burn patients. It is imperative that all burn patients be routinely screened for psychiatric complications.

Keywords : self-esteem, burns, disfigurement

Synthesis and characterization of anti-scar cellulose hydrogel containing placenta extract for the healing of second degree burn wounds

Zahra Ameri[1], Peyman Brouki Milan[2], Alireza Farsinejad[3]

1. Department of Tissue Engineering and Regenerative Medicine, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences, Tehran, Iran
2. Department of Tissue Engineering and Regenerative Medicine, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences, Tehran, Iran
3. Cell Therapy and Regenerative Medicine Comprehensive Center, Kerman University of Medical Sciences, Kerman, Iran

Background and Aim : Burns are the fourth most common type of trauma in the world, and the resulting injuries cause a lot of physical and mental damage to patients. Currently, many dressings are used to treat these wounds. In the meantime, hydrogel dressings have attracted the attention of researchers due to their inherent ability to imitate the extracellular matrix of the skin. The aim of the present study is to synthesize cellulose hydrogel containing placenta extract to increase skin healing in burn wounds and prevent scarring in patients with burn wounds.

Methods : First, cellulose was oxidized and a hydrogel was formed with gelatin polymer along with the extract of the placenta. Then the hydrogel was characterized by swelling, degradation, morphology and FTIR tests. Next, the biocompatibility of the hydrogels was evaluated by performing the indirect MTT test and the binding of fibroblast cells on the hydrogel with DAPI staining.

Results : The hydrogel was completely formed after adding gelatin and placenta extract to oxidized cellulose and was characterized. The survival rate of fibroblast cells treated with hydrogel extract containing placenta with MTT test was above 95%. In addition, fibroblast cells attached and grew well on the surface of cellulose hydrogel containing placenta extract.

Conclusion : Hydrogels are three-dimensional hydrophilic networks that are able to absorb wound secretions and also increase autolytic debridement and cool the wound surface by rehydrating dead tissues. Human placenta is a universally accepted biological material for the treatment of second and third degree burns, because it contains numerous proteins, and growth factors that increase the wound healing process and reduce the formation of scars and fibrosis. As it turned out, the results of cell tests, especially DAPI, showed well that cellulose

hydrogel containing placenta increases the proliferation and growth of fibroblast skin cells and can treat skin injuries. It is suggested to add antibacterial agents in other projects to prevent wound infection; It should also be investigated in the burn wound model in addition to the laboratory environment.
Keywords : cellulose, gelatin, placenta, burn wound

Development of antibacterial properties of bacterial cellulose-based dressings using montmorillonite nanoparticles for wound healing

Zahra Katoli[1], Mohammad Hossein Ghorbani[2], Mona Navaei-Nigjeh[3]

1. Department of Life Science Engineering, Faculty of New Sciences & Technologies, University of Tehran, Tehran, Iran.
2. Department of Toxicology and Pharmacology, Faculty of Pharmacy, Tehran University of Medical Sciences (TUMS), Tehran, Iran.
3. Pharmaceutical Sciences Research Center (PSRC), The Institute of Pharmaceutical Sciences (TIPS), Tehran University of Medical Sciences (TUMS), Tehran, Iran; Department of 4. Pharmaceutical Biomaterials and Medical Biomaterials Research Center, Faculty of Pharmacy, Tehran University of Medical Sciences (TUMS), Tehran, Iran.

Background and Aim : The skin, the largest body organ, acts as a powerful barrier against mechanical assaulters and prevents the entry of pathogens into the body. One of the skin injuries is burns, which cause approximately 300,000 deaths yearly, of which 90% are from low and middle-income countries. Various problems associated with burn wound treatment include improper dressing, life-threatening pathogenic infections, and resistance against antibiotics. For this reason, wound dressings with antibacterial properties have been developed in this field.

Methods : This study used the wound-healing property of bacterial cellulose (BC) with the antibacterial activity of montmorillonite (MMT) nanoparticles to design composite sheets for burns by the freeze-drying method. The antibacterial activities of prepared composites were tested against Escherichia coli.

Results : Possessing a large specific surface area and hydroxyl groups, the MMT exhibited antibacterial ability, and the percentage of healing was 65%. More strikingly, MMT could generate reactive oxygen species (ROS) upon visible light, promoting its antibacterial efficiency. As a result, BC/MMT composite showed efficient antibacterial performance toward E. coli.

Conclusion : These findings demonstrated the effect of MMT nanoparticles in improving antibacterial properties and wound healing. Therefore, BC/MMT composites prepared can potentially be used in wound healing and play a significant role in regenerating damaged skin.

Keywords : Burns - Wound dressing - Antibacterial Activity - Montmorillonite - Wound Healing

The study of using medical honey compared to stapler (disposable skin stapler Advan) for skin graft fixation in burn wounds in Velayat burn hospital in Rasht

Zahra Pourmohammadi Bejarpasi[1], Mohammadreza Mobayen[2], Nematollah Ahangar[3], Ebrahim Ghaffari[4], Parisa Bagheri[5], Alale Jarrahi[6]

1. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.
2. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.
3. Department of Pharmacology, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran
4. Dental Sciences Research Center, School of Dentistry, Guilan University of Medical Sciences, Rasht, Iran
5. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran.
6. Burn and Regenerative Medicine Research Center, Medicine Faculty, Guilan University of Medical Sciences, Rasht, Iran

Background and Aim : Skin grafts can be used effectively to cover burn injuries. The medical use of honey has been proven over the centuries. The most important role of honey in wound healing is to limit and prevent bacterial infections and thus reduce the amount of bacteria that present on wound surface. According to several studies using of staplers have the possibility of remaining in the tissue, needing re anesthesia to remove, possibilities of skin graft rejection, post-transplant infection, skin graft displacement , hematoma, skin graft contraction and edema. we decided to evaluate the use of medical honey in comparison with staplers in skin graft fixation and evaluate the effectiveness of honey in attaching the skin grafts as a primary consequence and compare the skin graft rejection, post-transplant infection , skin graft displacement, hematoma, skin graft contraction, edema, pain and pruritus as a secondary outcome in two groups using honey and stapler.

Methods : In this clinical trial study,80 patients with deep 2nd degree and 3rd degree burn wounds who need a graft and burns with less than 40% which are performed in one- step were added. These patients were randomly divided into two groups, group A (treated with stapler) group B(treated with honey). Finally,

the variables like transplanted skin displacement ,transplant rejection, edema , hematoma, graft contraction, pain, pruritus and infection after transplantation were evaluated and recorded at the specific times.

Results : In this study, 80 patients were included, Of these, 34 were male (42.5%) and 46 were female (57.5%). The mean age of patients was 39.29 years. Based on the results, a significant difference was observed in the number of hospital days (P = 0.034), infection rate, hematoma, edema, pain (P = 0.000), pruritus (P = 0.000) that in the honey group showed less. There was also a significant decrease in graft contraction in the stapler group (P = 0.047). No transplant rejection was observed in any group and other parameters were not significantly different.

Conclusion : Using medical honey-based treatment methods can improve the adverse effects of burn wounds treatment in patients.

Keywords : Honey, Skin graft, Burn, Stapler

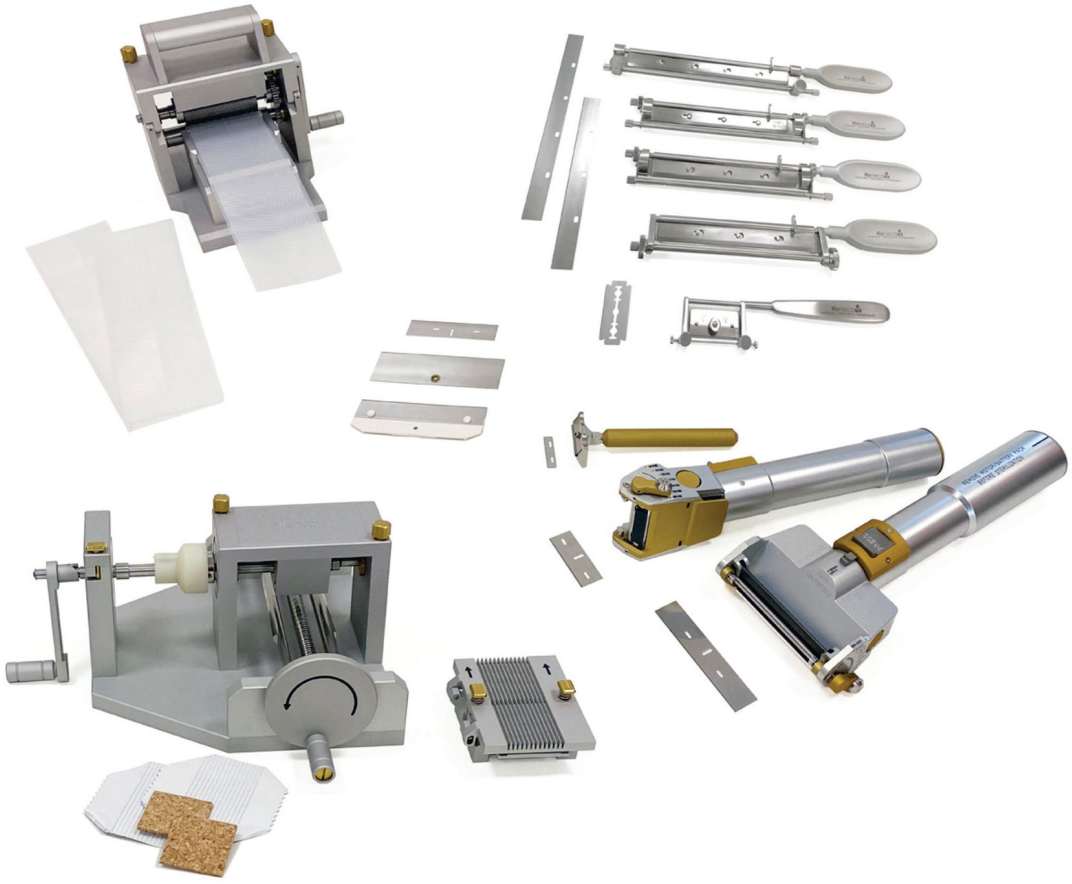
Humeca
Skin Transplantation Technology

Madar Salamat
Base Knowledge Company

Innovative products in the field of burn surgery

- MEEK Micrografting
- Dermatomes and blades
- Meshers and V-carriers
- Humeca Knives and blades

Humeca
Skin Transplantation Technology



مدار سلامت
دانش بنیان

تهران، خیابان ولیعصر(عج)، پایین تر از جمهوری ،کوچه لقمان ، پلاک ۲ ، طبقه سوم ، واحد ۹ ، کد پستی : ۱۳۱۶۷۵۵۶۶۵
تلفن : ۶۲۷۵۱۰۰۰
فکس : ۶۶ ۴۰ ۶۲ ۴۳
madarsalamat@yahoo.com
madar_salamat
www.madarsalamat.com

BIOPTRON
HYPERLIGHT THERAPY SYSTEM By Zepter Group

تحولی نوین در لایت تراپی

Revolution in
Low Level Light Therapy

FDA APPROVED

CLINICALLY TESTED Medical Device - EU93/42/EEC

SWISS MADE

ترمیم سریع‌تر صدمات اسکلتی - عضلانی
افزایش آزادسازی فاکتورهای رشد
تسکین درد موثرتر (حاد - مزمن)

- موثر - بدون عوارض جانبی
- ایمن برای همه گروه‌های سنی، شرایط مختلف

و تمامی گروه‌های حساس (نوزادان و اطفال، سالمندان، دوران بارداری، بیماران سرطانی و ...)

تسکین بدون عارضه درد :

- دردهای عضلانی و اسپاسمی
- کمر درد، شانه و درد گردن
- میگرن
- سندروم تونل کارپال
- روماتیسمی و مفصلی
- دردهای ناشی از سرطان و نوروپاتی بدنبال شیمی درمانی و رادیوتراپی

Quantum Medicine
FOR Quantum Body

فناوری دارای جایزه نوبل در استفاده از

مولکول های C_{60} در ایجاد فراپلاریزیشن سازگار با سلول

مهرگان تجارت کارمانیا
Mehregan Tejarat Karmania

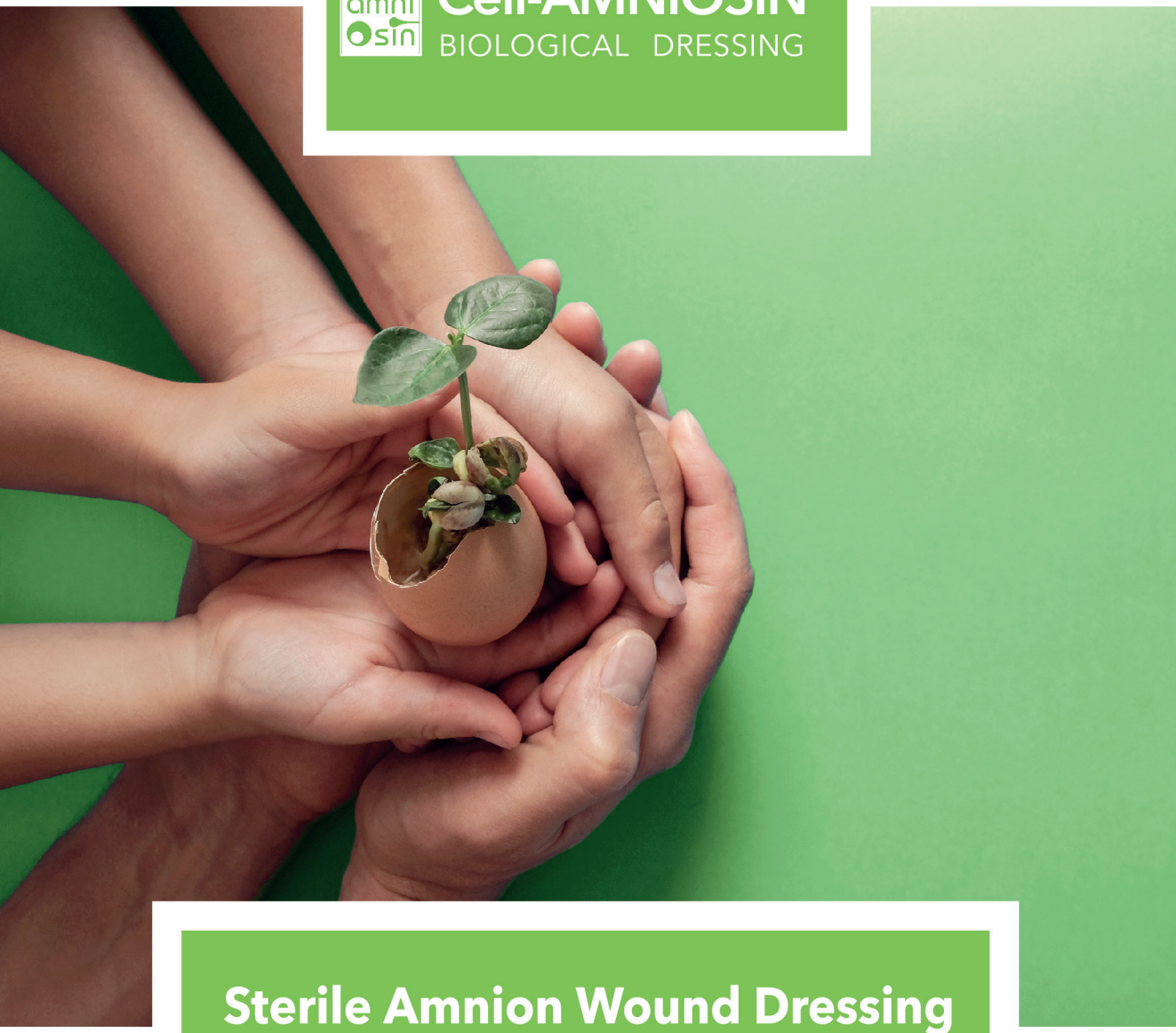
+98 (21) 88 53 4906

No.18, Second Alley, Arabali St.
Apadana Ave, Tehran, IRAN.

bioptron.ir

Cell-AMNIOSIN™

BIOLOGICAL DRESSING



Sterile Amnion Wound Dressing

Feel Maternal Care

arta pharmed

SinaCell
Sina Cell Research & Production Company
www.sinacellco.com

www.artapharmed.ir | info@artapharmed.com | +98 (21) 86092537 - 86092503 | artapharmed