بسم الله الرحمن الرحيم


نهمین کنگره سراسری سالیانه
انجمن پیوند سلول های بنیادی و سلول درمانی
و پرستاری پیوند ایران / کرمانشاه
دکتر محمد رضا مقدسی
تاب آوری در بیمار و دهنده ی پیوند سلول بنیادی
HSCRC
زمان : ۲ اسفندماه ۹۸
مکان : کرمانشاه، سالن همایش های بیمارستان امام رضا (ع)


HSCRC
انجمن علمی
پیوند سلولهای بنیادی خون ساز ایران
ارائه های دانشجویی نهمین کنگره پیوند سلول های بنیادی و سلول درمانی و پرستاری پیوند
فرید قبادی نژاد
Complications of Natural killer cell based therapies in solid tumors
احمد وطنی
Review on microRNAs applications in operative dentistry
محمد حسن کرمیان
Optimal chemo-mobilization method for collection of peripheral blood stem cells in patients with multiple myeloma
زهرا نیریزی
Programmer exosomes in immunotherapy
رضوان روشنی گلدسته
Cell therapy on chronic kidney diseases
مهشید حسینی
Immunotherapy approaches in heart injury
امیرحسین تندرو
Palliative care for bone marrow transplant patients
پرتو قهرمانی
A review on recent advances in cell sheet technology
با حضور اساتید برجسته
دکتر محمودرضا مرادی
رئیس دانشگاه علوم پزشکی کرمانشاه
دکتر اردشیر قوام زاده
استاد ممتاز و رئیس مرکز تحقیقات هماتولوژی و آنکولوژی و سلول های بنیادی تهران
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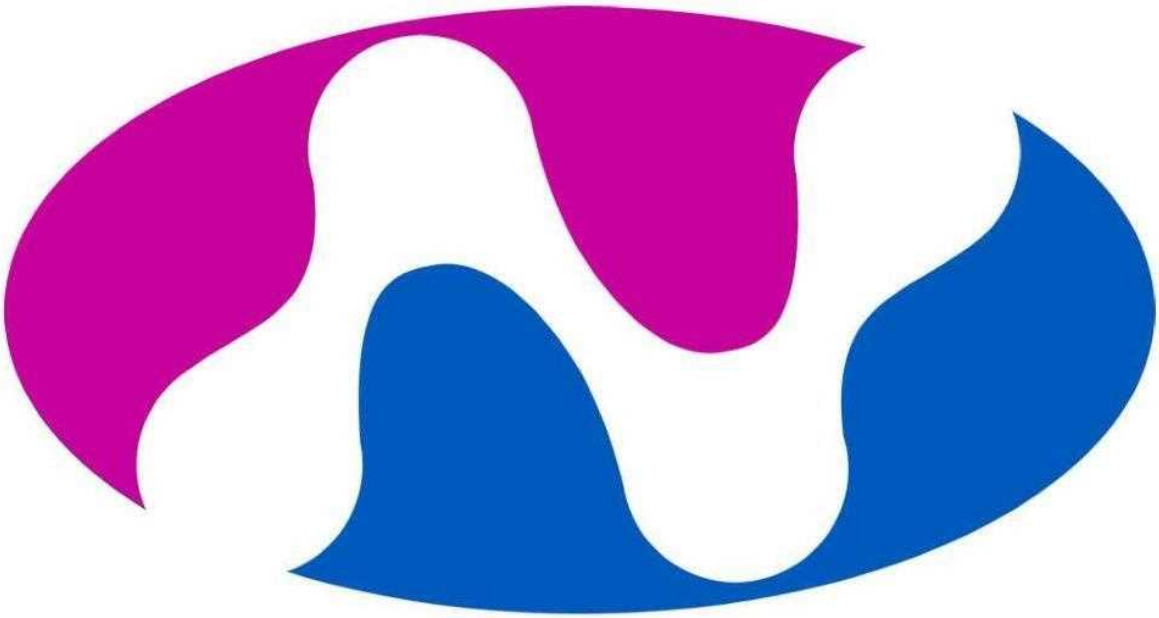

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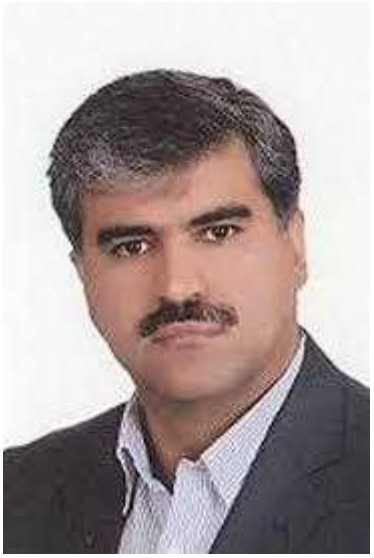
پیام ها

پیام رئیس دانشگاه

دکتر محمود رضا مرادی



به نام خدا

دیار کهن کرمانشاه ؛سرچشمه اساطیر ایران و شکوه آثار باستانی در روزهای موسوم به بهار کردی، میزبان جمع ارزشمندی از اساتید، پژوهشگران و صاحب نظران گرامی حوزه سلولهای بنیادی است که با حضور خود در نهمین کنگره سراسری سالیانه انجمن پیوند سلولهای بنیادی، سلول درمانی و پرستاری پیوند ایران آخرین یافته های علمی و تجربیات گران بهای خود را با یکدیگر به اشتراک گذاشته و دانش پژوهان در این گستره نوین و رو به توسعه را از دانش خود بهره مند سازند.

میزبانی این کنگره فخیم، بخصوص حضور بزرگان این رشته ها افتخاری برای مجموعه دانشگاه علوم پزشکی کرمانشاه است، که در سال های اخیر تلاش کرده است تا با برگزاری و میزبانی رویدادهای مهم علمی و پژوهشی کشور، نقش خود را به عنوان یک مرکز دانش مدار ایفا نموده و زمینه رشد و شکوفایی دانش پزشکی و علوم پیرامونی آن را فراهم نماید.

امید داریم که این گردهمایی در کنار دانش افزایی و هم افزایی که بی شک نقش مهمی در توسعه پزشکی و خدمت به مردم در سراسر کشور خواهد داشت، با خاطرات خوب اقامت در این استان همراه باشد و ما با میزبانی شایسته و در شان شما بزرگواران، اشتیاق دیدار مجدد از این استان به عنوان مرکز غرب ایران را برای شما و خانواده محترمتان فراهم نمایم.

دکتر محمود رضا مرادی

رئیس دانشگاه

پیام ریاست نهمین کنگره سراسری انجمن پیوند سلولهای بنیادی ایران

پروفسور اردشیر قوام زاده

با عنایات پروردگار و تلاش همکاران و علاقمندان رشد و پیشرفت علمی در دایره سلول های بنیادی ایران زمین مقدمات برگزاری نهمین کنگره سراسری سلول های بنیادی و سلول درمانی و پرستاری پیوند امسال فراهم شد.

کنگره نهم مصادف است با جشن سی امین سالگرد انجام پیوند سلول های بنیادی در ایران، زمانی که به راه طی شده نظر می افکنیم و سیر تحولات رو به جلو سال های اخیر در زمینه این دانش شگرف در دنیا و کشور خود را نظاره می کنیم بر خود می بالیم که همه با هم در این راه سترگ قدم نهاده و عزم خود را جزم تا تاریکی ها را با نویدی روشن از سپیدی و دانش روز جایگزین نماییم.

اینجانب بر خود واجب میدانم که در این مسیر پر فراز و نشیب و امید بخش در کنار همکاران جوان تر و علاقمند به رشد و شکوفایی و اعتلای ایران در برگزاری این کنگره ارزشمند و متعالی همراه و همگام گردم.

امید است در این برنامه پر بار که در دیار مردان و زنان سخت کوش کرمانشاه برگزار خواهد شد، شاهد هم اندیشی پزشکان و پژوهشگران بلند مرتبه دانش سلول های بنیادی کشورمان باشیم.

در ادامه مراتب تقدیر و سپاس خود را نثار همه عزیزان اعم از پزشکان و پرستاران گرانقدر که این مهم بدون تلاش بی وقفه ایشان نا ممکن می نمود می نمایم و با بیتی از فردوسی بزرگ به پایان می برم.

پی افکندم از نظم کاخی بلند

که از باد و باران نیابد گزند

اردشیر قوام زاده

کرمانشاه، یکم اسفند نود و هشت

پیام دبیر علمی و اجرایی کنکره نهم

دکتر مهرداد پاینده

منّت خدای را عزوجل که طاعتش موجب قربتست و به شکر اندرش مزید نعمت، افتخار داریم که میزبان نهمین کنگره سالیانه انجمن سلول های بنیادی و پیوند در پرستاری ایران باشیم.

سرعت تحولات چند ده اخیر دانش پزشکی خصوصاً در زمینه سلولهای بنیادی و سلول درمانی در جهان امروز نوید بخش تغییرات شگرف در امر درمان است.

در این مسیر پر فراز و نشیب تحولات، دانشمندان عرصه پزشکی کشور عزیزمان ایران نیز همتای تلاشگران عرصه های بین المللی مسیری را برای ما رقم زدند که نتایج برکات ان را در زندگی بیماران دردمند قابل لمس است.

با گذشت بیش از شصت سال از انجام اولین پیوند سلول های بنیادی در دنیا همچنان تلاش های علمی محققین این رشته نوین پزشکی ادامه داشته و ما هر سال در کنگره های علمی شاهد ارائه دستاوردها و نتایج ارزشمند کاربردی تازه ای هستیم.

امسال نیز محققین برتر کشورمان در کرمانشاه گرد هم جمع شده تا با بحث و تبادل نظر در این زمینه به انجام این مهم اهتمام وردود.

باشد که هر روز راه درمان بیماری های سخت سهل تر و آلام بیماران کمتر گردد.

در پایان آرزومندم که اساتید و میهمانان گرامی أیام خوشی را طی این سه روز در کرمانشاه سپری نمایند.

دبیر علمی و اجرایی نهمین کنگره

مهرداد پاینده -اسفند نود و هشت

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پذیرایی				14:40-15
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مجری : عبدالرضا آرمانده دبیرعلمی : مهرداد پاینده ریاست دانشگاه : محمود رضا مرادی ریاست مجتمع بیمارستانی امام رضا (ع): علی سروش ریاست کنگره : اردشیر قوام زاده				
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ه) شام (19-20)				

روز دوم پنجشنبه ۱ اسفند

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گرداننده : دکتر بابک حق شناس، علیرضا جانبخش				
زمان	عکس	نام سخنران	عنوان	ردیف
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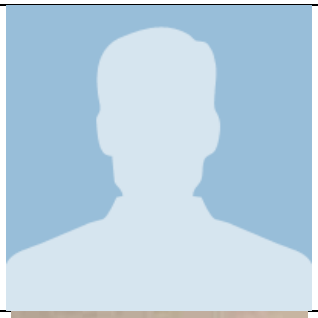
۴	مراقبتها و درمان عارضهGVHD گوارشی	لطف اله عسگری ؛کرمانشاه (گوارش و کبد)		9:20-9:40
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پرسش و پاسخ				10:20-10:40
پذیرایی				10:40-11
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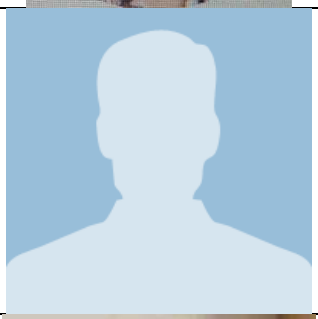
۸	تازه های دارویی GVHD	علیرضا نصیری فر؛ سنندج (خون و سرطان)		11:20-11:40
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پرسش و پاسخ				14-14:20
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پرسش و پاسخ				**15:40-16**

روز پنجشنبه ۱ اسفند

سمینار پرستاری

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۱	**خیر مقدم و خوش آمد گویی**	**علی سروش** (متخصص طب ورزش و اصلاح سبک زندگی ریاست محترم مجتمع بیمارستانی امام رضا (ع) عضو هیات علمی)		**8:30-9**
	گزارش عملکرد بخش پیوند مغز استخوان مجتمع بیمارستانی امام رضا (ع) کرمانشاه	**محمود فخری** (کارشناس ارشد بهداشت جامعه عضو هیات علمی معاونت توسعه و برنامه ریزی مجتمع بیمارستانی امام رضا (ع))		**9-9:30**
۲	**نکات کلیدی آموزش به خانواده و بیماران کاندید پیوند مغز استخوان**	**شکوه ورعی** (دکتری آموزش پرستاری مدیر پرستاری دانشگا ه تهران عضو هیات علمی)		**9:30-10**
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استراحت و پذیرایی				**10:30-11**

هیأت رئیسه: اشرف السادات موسوی ، سکینه قربانی (11-12:30)				
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روز سوم جمعه ۲ اسفند ماه

برنامه کنگره روز سوم (پزشکی و پرستاری)

سالن الف) ارائه مقالات پذیرفته شده				
هیأت رئیسه : بایزید قادری، علی ملکی				
ردیف	عنوان	ارائه دهنده	عکس	زمان
۱	The study of Blood consumption for Stem Cell Transplant Patients in Shahid Ghazi Tabatabaei Hospital, Tabriz, Iran	Naser Shagerdi Esmaeli		8-8:20
۲	Application of adipose derived stem cell in tissue regeneration	Mozafar khazaei		8:20-8:40
۳	Infection profile of patients undergoing autologous bone marrow transplantation in Tabriz, Iran	Naser Shagerdi Esmaeli		8:40-9
۴	results of allogenic haploidentical compare with match sibling transplant	Bayazid Ghaderi		9-9:20
پرسش و پاسخ				9:20-9:40
استراحت و پذیرایی				9:40-10

۵	**Nurses roles and capabilities in the care of haematopoietic stem cell transplantations patients**	**Leili Rostamnia**		**10-10:20**
۶	**Hematopoietic stem cell transplantation for HIV cure**	**Chiman Karami**		**10:20-10:40**
۷	**Ellagic acid Improve Testicular Dysfunctional via Autophagy in Tamoxifen-Injured Rat**	**Ali Olfati**		**10:40-11**
۸	**نقش آزمایشگاه در پیوند سلول‌های بنیادی خونساز**	**علی ملکی**		**11-11:20**
۹	**An Intelligent Clinical Decision Support System for Predicting pre-occurrence of aGVHD following Allo-HSCT**	**Abbas Hajifathali**		**11:20-11:40**
پرسش و پاسخ				**11:40-12**

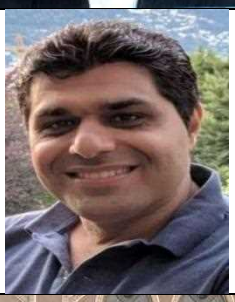
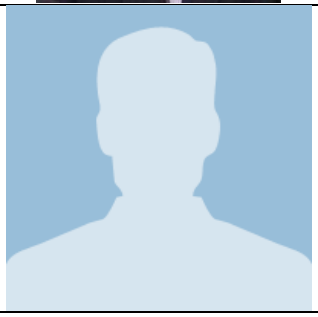
برنامه کنگره روز سوم (دانشجویان)

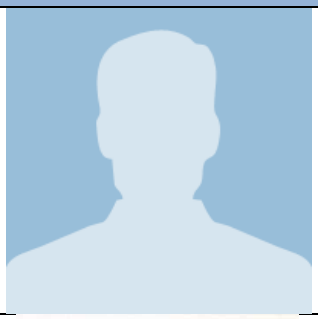
سالن ب) ارائه مقالات دانشجویی				
هیأت رئیسه : محمد طاهر مرادی ، داوود رضا زاده				
ردیف	عنوان	ارائه دهندگان	عکس	زمان
۱	Effective Chemo-mobilization Method for Collection of Peripheral Blood Stem Cells in Patients with Multiple: A Cross-sectional Study	Mohammad-Hasan Karamian		8-8:20
۲	Programmer exosomes in immunotherapy	زهرا نیریزی		8:20-8:40
۳	World Marrow Donor Association International Standards for Unrelated Hematopoietic Stem Cell Donor Registries	Zahra samimi		8:40-9
۴	Immunotherapy approaches in cardiovascular disease	Seyede Mahshid Hosseini		9-9:20
پرسش و پاسخ				9:20-9:40
استراحت و پذیرایی				9:40-10

۵	**Review on microRNA applications in operative dentistry**	**Ahmad Vatani**		**10-10:20**
۶	**Complications of Natural killer cell based therapies in solid tumors**	**Farbod Ghobadinezhad**		**10:20-10:40**
۷	**بررسی تاثیر مراقبت های تسکینی در کاهش عوارض پیوند مغز استخوان (یک مطالعه مروری)**	**امیرحسین تندرو**		**10:40-11**
۸	سلول درمانی بیماری های مزمن کلیوی	**رضوان روشنی گلدسته**		**11-11:20**
۹	**Recent advances in cell sheet technology**	**Parto Ghahramani**		**11:20-11:40**
پرسش و پاسخ				**11:40-12**

سالن ج) مراقبت های روانی بیمار پیوندی (8-12)				
زمان	عکس	ارائه دهندگان	عنوان	ردیف
8-8:20		مهدی شیرزادی فر؛ کرمانشاه (اعصاب و روان)	بقا و انطباق در بیمار پیوند	۱
8:20-9		محمد رضا مقدسی (دکتری مدیریت)	تاب آوری پیوند	۲
9:20-9:40		مهدی شیرزادی فر؛ کرمانشاه (اعصاب و روان)	توانمند سازی و ارتقا روانی پرستاران پیوند	۳
9:40-10	پرسش و پاسخ			
10-12	سالن ج) تقدیر از اهداء کننده گان سلول های بنیادی مرکز پیوند مغزاستخوان مجتمع امام رضا (ع) با مدیریت بخش پیوند مغزاستخوان و همکاری صدا و سیما			

سالن آمفی تئاتر : پانل اطفال (8-11)

هیأت رئیسه : رضا اکرمی پور				
۱	ارائه نتایج پیوند الوژن در آنمی آپلاستیک ارثی	حسن محمودی؛ بابل (خون و سرطان کودکان)		8-8:20
۲	ارائه نتایج پیوندTandem درمیلوم مالتیپل	احمد احمد زاده ؛ اهواز (خون و سرطان بزرگسالان)		8:20-8:40
۳	ارائه نتایج پیوند درALL	غلامرضا باهوش ؛ تهران (خون و سرطان کودکان)		8:40-9
۴	Cord blood banking	مرتضی ضرابی		9-9:20
۵	چشمی مقاوم به پردنیزولون	ستار حیدری ؛ کرمانشاه (شبکیه چشم)		9:20-9:40

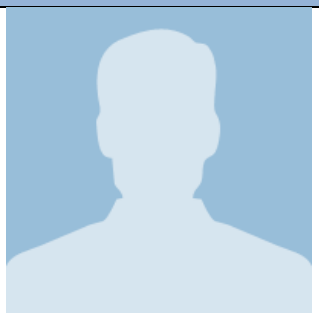
۶	GVHDنورولوزیک و درمان	نازنین رزازیان ؛ کرمانشاه (مغز و اعصاب)		9:40-10
۷	عوارض درازمدت اندوکرین در پیوند	روناک نعلینی ؛ کرمانشاه (خون و سرطان بزرگسالان)		10-10:20
	پرسش و پاسخ			10:20-10:40
	پذیرایی			10:40-11
پانل مراقبتهای پیوند (11-13)				
هیأت رئیسه : داوود رضازاده ، حق شناس				
۸	رسیدگی به جنبه های روانی بیمار پیوند	مریم خانگی ؛ کرمانشاه (اعصاب و روان)		11-11:20
۹	درمان موکوزیت	ولی الله مهرزاد ؛ اصفهان (خون و سرطان بزرگسالان)		11:20-11:40

11:40-12		علی ملکی؛ کرمانشاه (هماتولوژی)	فوتوفرزیس در درمانGVHD	۱۰
12-12:20		مهران پور نظری ؛ کرمانشاه (روماتولوژی)	پیوند سلول های بنیادی در بیماری های اتو ایمیون	۱۱
12:20-12:40	پرسش و پاسخ			
12:40-13	اختتامیه			
13-14	نهار و نماز			

روز جمعه ۲ اسفند

سمینار پرستاری

هیأت رئیسه : فریبا بلورچی فرد ، فرزانه چاردولی (8-10)				
زمان	عکس	نام سخنران	عنوان	ردیف
8:30-9		مهرداد پاینده (فوق تخصص هماتولوژی و عضو هیات علمی مدیکال انکولوژی KUMS)	رژیم هایconditioning	۱

۲	**اصول تغذیه در بیماران پیوند مغز استخوان**	**آلاله مدیری** (کارشناس ارشد تغذیه مسئول مشاوره تغذیه مجتمع بیمارستانی امام رضا (ع))		**9-9:30**
۳	**حمایت های روحی روانی از خانواده و بیماران تحت پیوند مغز استخوان**	**معصومه رشیدی الاشتی** (کارشناس ارشد روان پرستاری دنشگاه علوم پزشکی ساری)		**9:30-10**
استراحت و پذیرایی				**10-10:30**
۴	**اصول مراقبتهای پرستاری تخصصی در پیوند مغز استخوان**	**سکینه قربانی** (کارشناس پرستاری سرپرستار بخش پیوند مغز استخوان مجتمع بیمارستانی امام رضا)		**10:30-11**
هیأت رئیسه : شکوه ورعی ، محمد رضا رضایی (10:-12:30)				
۵	**ارائه راهکارهای مراقبت صحیح از بیماران بخش پیوند مغز استخوان**	**شکوه ورعی** (دکتری آموزش پرستاری) **فریبا بلورچی** (دکتری تخصصی پرستاری) **محمود فخری** (کارشناس ارشد بهداشت جامعه) **معصومه رشیدی الاشتی** (کارشناس ارشد روان پرستاری)		**11-11:30**

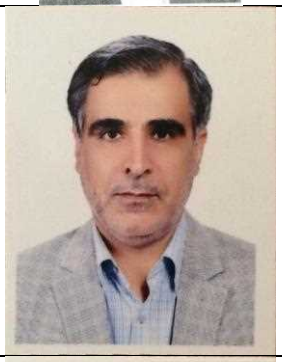
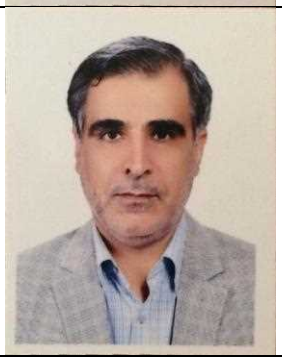
		سکینه قربانی (کارشناس پرستاری) **اشرف السادات موسوی** (کارشناس پرستاری)		
11-11:30	**پرسش و پاسخ**			
11:30-12	**ناهار و نماز**			

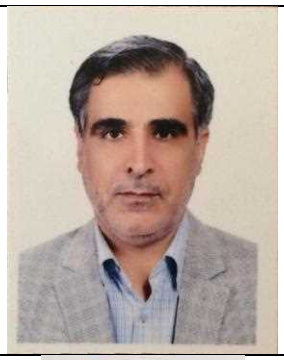
پوستر

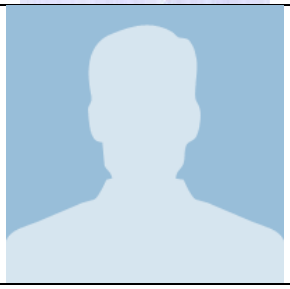
ردیف	عنوان پوستر	نام نویسنده	عکس
۱	Performance of bone marrow transplantation center in Imam Reza hospital, Kermanshah, Iran	**Fatemeh Yari**	
۲	An uncommon case of thrombotic thrombocytopenic purpura (3 days after engraftment) in autologous peripheral blood stem cell (PBSC) transplantation in a young girl with hodgkin disease	**Farzaneh Chardoli**	
۳	AIDS treatment policy at bone marrow transplant	**Mehrdad Payandeh**	
۴	Evaluation of side effects and efficacy of Lomustine (CCNU) and Bandamustine in patients with lymphoma	**Azam Elahi**	

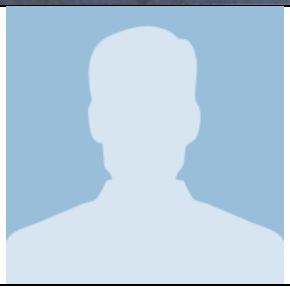
۵	Early hepatic complications during the first year after bone marrow transplantation in patients with leukemia	**Azam Elahi**	
۶	بررسی ارتباط بررسی ارتباط ایمنوگلوبولین های آنتی CMV (سایتومگالوویروس) با زمان اینگرافت در بیماران پیوند مغز استخوان در شهر کرمانشاه	**رویا چگنه لرستانی**	
۷	چگونگی مراقبت ازکاتترهای ورید مرکزی	**Sakineh Ghorbani**	
۸	ملاحظات پرستاری در بیماران پیوند سلولهای بنیادی باGVHD	**Sakineh Ghorbani**	
۹	Comparison of Continuous Mononuclear Cell Collection (cMNC) and Mononuclear Cell Cell (MNC) methods for cell proliferation (Apheresis) in patients with bone marrow transplantation	**Sakineh Ghorbani**	
۱۰	Investigation of microbial contamination of bone marrow transplantation in Imam Reza hospital in Kermanshah city	**Somayeh Jaefari**	

۱۱	The Cancer Patients' Nutritional Status: The Case of Candidates of Stem Cell Transplantation	**Alaleh Modiri**	
۱۲	The role of nursing care in bone marrow transplantation	**Khadijeh Chalehchaleh**	
۱۳	Determinants of serious bloodstream infections in Iranian pediatric cancer patients	**Naser Shagerdi Esmaiel**	
۱۴	Evaluation of release rate of cisplatin drug loaded on poly butyl cyanoacrylate nanoparticles in simulated in vitro brain mass simulation	**Nilofar Abdirad**	
۱۵	The study of Polylactic acid – hydroxyapatite (PLA/HA) nanocomposite in simulated body environment for orthopedic fixation applications: A 24-week study	**Mohamad Gowdini**	
۱۶	چالش ها و راهکارهای پیوند مغز استخوان (یک مطالعه مروری)	**امیرحسین تندرو**	

۱۷	بررسی ارتباط حمایت اجتماعی خانواده بر تاب آوری در بیماران پیوند مغز استخوان	**سپیده سلطانی پور**	
۱۸	The effect of stem cells on blood glucose level in diabetes mellitus	**Sorour Dastafkan**	
۱۹	بیومارکرهای کاربردی برای پیامدهای پس از پیوند سلولهای بنیادی خونساز(HSCT)	**علی ملکی**	
۲۰	The influence of non-compliance of anti-retroviral therapy on mortality and survival of HIV+/AIDS patients co-infected with hepatitis and /or TB over a 25 years period: observational cohort study	**Ebrahim Shakiba**	
۲۱	The association between duration of mobile use and blood parameters: Evidence from the Ravansar Cohort Study	**Ebrahim Shakiba**	

۲۲	Tuberculosis treatment results in Western Iran over the past 13 years	**Ebrahim Shakiba**	
۲۳	بررسی کاربرد سلول درمانی در درمان بیماری های قلبی و عصبی	**صبا کریمی**	
۲۴	**اخلاق پزشکی در ارتباط با پیوند سلول های بنیادی جنینی**	**صبا کریمی**	
۲۵	Human Embryonic Stem Cells in Regenerative Medicine	**Fereshteh Afkar**	
۲۶	A Review of the Effectiveness of Resilience Training on Life Expectancy and psychological well-being and Cancer Patients' Quality of Life	**Ghodrat Ghazipoor**	

۲۷	مروری بر عوارض عفونی بعد از پیوند سلول های بنیادی	**الهام رحمانیان**	
۲۸	Molecular imaging in stem cells therapy	**Saleh Salehi Zahabi**	
۲۹	Protective effect of royal jelly against cyclophosphamide induced thrombocytopenia in rat	**Fatemeh Khazaei**	
۳۰	A Comprehensive Review on Up-To-Date Clinical Applications of Platelet-Rich Plasma (PRP)	**Abbas Ahmadi**	
۳۱	GVHD	**محبوبه کاظم پور**	

۳۲	Antimicrobial Resistance of Bacterial Uropatho-gens Isolated from Iranian Kidney Transplant Recipients	**Azad Khaledi**	
	مروری بر شیوع عفونت فعال سیتومگالو ویروس در دریافت کنندگان پیوند کلیه	**سپیده خدامرادی**	

روز اول چهارشنبه ۳۰ بهمن ماه

پانل انتخاب بیمار

نقش جمع آوری صحیح اطلاعات در رجیستری بین الملل

فرید نجفی؛ کرمانشاه

(اپیدمیولوژی)

پزشکی امروز علیرغم گسترش مرزهای دانش، بیش از هر زمان دیگری به شواهد قابل اعتماد برای تصمیم گیری در سناریوهای بالینی پیچیده نیاز دارد. بدون تردید یکی از بهترین منابع برای ایجاد چنین شواهدی استفاده از نتایج نظامهای ثبت بیماری در دنیاست. چنین نظامهایی با ارایه شواهد معتبر در باره روند بیماریها، کیفیت درمان و در نهایت کمک به مدیران سیستم بهداشت و درمان برای اولویت بندی نیازهای لجستیکی برای کنترل و درمان بیماریها، میتوانند کمک شایان توجهی به ایجاد شواهد علمی نماید. از طرف دیگر برای راه اندازی نظامهای ثبت بیماری، ترجیحا نیازمند نظام یکپارچه ارایه خدمات به بیماران در سطوح مختلف (ازارایه خدمات بهداشتی درمانی اولیه تا ارایه خدمات درمانی در سطوح بالاتر در بیمارستان) هستیم. حتی با نبود چنین نظامی، وجود اطلاعات کامل از بیماران مراجعه کننده برای ارایه دریافت خدمات درمانی به بیمارستانها و مراکز درمانی در همه دنیا به عنوان یکی از بهترین مستندات برای راه اندازی نظامهای ثبت نام در دنیا مورد استفاده قرار میگیرد. از همین رو در بسیاری از کشورها با استفاده از داده های موجود در نظام ارایه خدمات بهداشتی درمانی رجستریهای متعددی را راه اندازی کرده اند.

تاثیر kir غیر همخوان در نتایج و طول عمر بیماران پیوند هاپلوایدنتیکال

مهدی تقدسی ؛ کرمانشاه

(ایمنی شناسی)

Haploidentical-HSCT is a suitable treatment modality in patients with hematological malignancy who lack a matched related donor. Insight to the NK cell alloreactivity is one of the outstanding achievement comes from haplo-HSCT. Unleashing NK cell alloreactivity will provide with favorable effects on HSCT outcomes, especially protection from relapse in the graft-versus-leukemia GVL reaction. Killer Immunoglobulin-like receptors (KIRs) are the group of 17 polymorphic genes that inherited together and collectively with their related ligand (KIR-L), including (HLA-C1, -C2, - BW4, and -BW6) modulates various aspect of NK cell anti-tumor activity. This presentation aims to briefly review the contribution of KIRs and their cognate ligand matching in the outcome of allo-HSCT.

Gene therapy for metabolic disorders

Dr Reza Alibakhshi

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Gene therapy is an experimental technique that uses genes to treat or prevent disease. Gene therapies have been a point of discussion during the last several years as a potential curative option for a variety of disease indications. Gene therapy has recently shown great promise as an effective treatment for a number of metabolic diseases caused by genetic defects in both animal models and human clinical trials.

In the future, this technique may allow doctors to treat a disorder by inserting a gene into a patient's cells instead of using drugs or surgery. Researchers are testing several approaches to gene therapy, including:

- Replacing a mutated gene that causes disease with a healthy copy of the gene.
- Inactivating, or "knocking out," a mutated gene that is functioning improperly.
- Introducing a new gene into the body to help fight a disease.

Gene therapy has some potential risks. A gene can't easily be inserted directly into your cells. Rather, it usually has to be delivered using a carrier, called a vector.

Many metabolic diseases are compelling candidates for gene therapy, and are the subject of vigorous pre-clinical research. Successful phenotype correction in mouse models is now commonplace and research effort is increasingly being directed towards addressing the translational challenges inherent in human clinical trials.

The majority of the cardiovascular and metabolic disorder (CVMD) gene therapies in development are targeting cardiovascular indications, indicating immense opportunity for biotech companies to pursue drug candidates that target metabolic disorders.The possibilities of gene therapy hold much promise. Clinical trials of gene therapy in people have shown some success in treating certain diseases.

Gene therapy continues to be a very important and active area of research aimed at developing new, effective treatments for a variety of diseases.Although gene therapy is a promising treatment option for a number of diseases (including inherited disorders, some types of cancer, and certain viral infections), the technique remains risky and is still under study to make sure that it will be safe and effective. Gene therapy is currently being tested only for diseases that have no other cures.

Keywords: Gene therapy , metabolic disorder, Gene mutation

The Role of Nursing Care in Transplant Patients

علیرضا خاتونی ؛ کرمانشاه

(دانشیار پرستاری)

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Background & Objective: Today, the number of transplant surgeries in the world and Iran is increasing. Full collaboration between the medical team in transplant success is important. The purpose of this review article is to investigate the role of nursing care in outpatient transplant patients.

Materials and Methods: This review study was performed using databases such as Clinical Key and PubMed.

Results: During discharge, a transplant coordinator nurse holds an educational session with the patient and his/her family. This session will include determining the day and time of the patient's visit to the outpatient clinic, reviewing the medications received, training in proper wound care, dieting, limits on activity, and familiarizing with the symptoms leading to the infection, and teaching symptoms that require immediate hospitalization. During the outpatient visit, the patient is examined by a surgeon, a nutritionist, and a nurse. Necessary blood tests are performed, patient complaints are evaluated, the wound is examined, and finally, the necessary recommendations are made.

Discussion: The outcome of transplant surgery is influenced by the full cooperation of the transplant team, and nursing care is of particular importance. Therefore, nurses working in transplant and outpatient clinics must have sufficient knowledge and skills in this field.

Keywords: Nursing care, Transplant, Outpatient

روز اول چهارشنبه ۳۰ بهمن ماه

پانل سلول درمانی

Decidual stromal cells in GVHD treatment

عباس حاج فتحعلی؛

شهید بهشتی

(خون و سرطان بزرگسالان)

Abbas Hajifathali

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Allogeneic hematopoietic stem cell transplantation (allo-HSCT) is used as a curative approach to treat a wide range of hematologic malignancies and disorders. Although allo-HSCT can induce beneficial effects in various disease, it is associated with different life-threatening complications. Graft versus host disease (GVHD) is the most cause of mortality that occurs in more than 50% of patients who underwent allo-HCT. First-line therapy for acute GVHD still remains the use of high-dose corticosteroids. Unfortunately, 40–60% of patients with aGVHD exhibit steroid resistance, which is associated with a very poor prognosis. As no effective second-line therapy existed, in recent decades various treatment options were considered for the treatment of therapy-refractory GVHD. A cell-based therapeutic approach, using mesenchymal stem cells (MSCs), has recently shown considerable promise because of their expected immunomodulatory effects. These non-haematopoietic cells of stromal are easy to isolate and expand, possess immunomodulation capacities as well as anti-apoptotic, anti-inflammatory and anti-oxidative effects, without any risk of teratoma. MSC can isolate from different adult (adipose tissue, peripheral blood, bone marrow) and neonatal tissues (particular parts of the placenta and umbilical cord). Studies showed placenta-derived decidual stromal cells (DSCs) are immunosuppressive than MSCs and they were introduced as a novel therapy for acute GVHD. We evaluated placenta-derived decidua stromal cells (DSCs) as a treatment for steroid-refractory GVHD in patient underwent HSCT. The DSCs were given to 10 patients with a dose of 10^6 cell/kg. Monitoring ended 6 months after the last DSCs infusion. No patient revealed adverse effects during and/or post DSCs infusion. The GVHD response (no/complete) was 3/7 in DSCs-treated patients. We suggest DSCs infusions appear safe and probably effective in steroid-refractory GVHD. More randomized trials are required to prove efficacy.

Key words: graft versus host disease, mesenchymal stromal cells, hematopoietic stem cell transplantation, decidual stromal cells

Hematopoietic Stem Cell Transplantation in Taleghani Hospital

مهشید مهدیزاده؛

شهید بهشتی

(خون و سرطان بزرگسالان)

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Background and Aim: Hematopoietic stem cell transplantation (HSCT) is undoubtedly one of the most important treatment opportunity for patients suffering from blood disorders. Taleghani bone marrow transplantation center was established in 2007 as the second center of marrow transplants in Iran and 1055 was applied thus far. This report summarizes Taleghani experience during 12 years.

Methods: In this retrospective study, the data were collected from patient's files between 2007-2019.The number of hematological and non-hematological malignancies, sex of patients and type of transplantation were analyzed. Frequency and mean tests were used to investigate the differences between variables. The SPSS software was used to analyze the variables.

Results: 275 autologous-HSCT and 780 allogenic HSCT was performed. Majority of patients were upper 40 and between 20-30 years in autologous and allogenic setting, respectively. Male/female ratio was 1.17 (men: 54.09%, female: 45.91%). For autologous-HSCT, multiple myeloma and for allogenic HSCT, acute myeloid leukemia were highest rate between all diseases.

Conclusion: Despite the advent of improved treatments, numerous patients still benefit from the transplants. It should be mentioned that in our centers, the status of every patient is discussed in transplantation committee and based on analysis of results the number of eligible patients have been increased in the last previous years. Reduced intensity conditioning chemotherapy, novel mobilizer agents, mesenchymal stem cell therapy and recent medicines as maintenance treatment, are leading factors increased number of patients eligible for transplantations.

Key words: Hematopoietic stem cell transplantation, Autologous transplantation, Allogenic transplantation.

T-cell therapy for viral infections after hematopoietic stem cell transplantation

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شهید بهشتی

(خون شناسی آزمایشگاهی

و بانک خون)

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Hematopoietic stem cell transplantation (HSCT) raises a promising curative option for a larg group of malignant and nonmalignant disorders. The conditioning regimens prior to the HSCT and also prophylaxis regimens given to the patients to prevent graft-versus-host disease (GvHD) compromise the immune system of the recipient. Hence, the immune-compromised recipients are highly susceptible to infections, especially viral infections which cause a large part of morbidity and mortality of patients undergoing HSCT. Although the anti-viral medication is routinely prescribed, reactivation of opportunistic viruses such as Cytomegalovirus (CMV) and infection with other viruses including Epstein-Barr virus (EBV), Adenovirus, Herpes simplex virus (HSV) and varicella-zoster virus (VZV) are common due to the drug resistance and lack of immune reconstitution. Adoptive transfer of donor-derived T cells is an attractive approach to restore protective immunity in patients with refractory viral infections after HSCT. Non-specific T cell transfer can increase the concerns of GvHD, while recently, adoptive transfer of virus-specific T cells gives promises in targeted treatment of viral infections with minimum adverse events. Due to the high costs of personalized medicine in virus-specific T cell therapy for each recipient, recent studies have focused on the feasibility of using partially matched third-party virus-specific T cells as an off-the-shelf medication. The other era in which the researchers are interested in is to pool the virus-specific T cells against various types of viruses to broaden the applicability of the product to multiple viruses and reduce the costs. Here, we summarized the recent development and future of adoptive T cell therapy for viral infections.

Key words: Hematopoietic stem cell transplantation, viral infection, T cell therapy.

Quality of cellular products in treatment outcome

الهام روشندل؛ شهید بهشتی

(خون شناسی آزمایشگاهی)

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Cancer is one of the leading causes of death worldwide. A number of cytotoxic approaches for neoplastic diseases has been developed but they have demonstrated very limited efficacy for patients with late-stage disease. Therefore, effective therapeutic approaches with improved outcome are urgently needed for cancer patients. CAR T-cell therapy is an innovative approach for programing the immune system to attack cancer cells. Experimental and Clinical studies have shown very promising results in end-stage patients with a full recovery of up to 92% in ALL patients. However, the effectiveness of CAR T cell therapy in solid tumors has limited due to therapeutic barriers.

The development of well-characterized methods of production and quality assessment of cell therapy products has become increasingly important as therapies advance through clinical trials toward approval.

The quality control of manufacturing processes is included control of materials production, In-process control and testing, release testing, and validation of the production process. In addition to scientific and quality considerations, it is critical to perform stability studies and nonclinical research such as GMP compliance, analysis of test sample, *in vivo* pharmacodynamics and pharmacokinetics studies, and non-clinical safety studies to ensure the safety and effectiveness of cell therapy's products.

Key words: Cell therapy, Quality control, manufacturing processes

روز دوم پنجشنبه ۱۱ اسفند

پانل لوکمی

اختلالات جنسی در بیماران پیوندی

مریم شیرزادی ؛ کرمانشاه

(اعصاب و روان)

Hematopoietic stem cell transplantation (HSCT) plays a central role in patients with malignant and, increasingly, nonmalignant conditions. Sexual dysfunction is a commonly described but relatively often underestimated complication after HSCT.

Conditioning regimens, generalized or genital graft-versus-host disease, medications, and cardiovascular complications as well as psychosocial problems are known to contribute significantly to physical and psychological sexual dysfunction. Moreover, it is often a difficult topic for patients, their significant others, and health care providers to discuss. Early recognition and management of sexual dysfunction after HSCT can lead to improved quality of life and outcomes for patients and their partners. This review focuses on the risk factors for and treatment of sexual dysfunction after transplantation and provides guidance concerning how to approach and manage a patient with sexual dysfunction after HSCT.

مراقبتها و درمان عارضه GVHD گوارشی

لطف اله عسگری ؛کرمانشاه

(گوارش و کبد)

CLINICAL AND HISTOLOGICAL MANIFESTATIONS

Timing and organ involvement

Acute GVHD is a common complication of allogeneic hematopoietic cell transplant (HCT) that classically presents in the early post-transplantation period. The initial signs and symptoms of acute GVHD most commonly occur around the time of white blood cell engraftment.

Although initial definitions of acute GVHD required an onset of symptoms before 100 days post-transplantation, the current National Institutes of Health (NIH) consensus criteria use clinical findings, rather than a set time period, to differentiate between acute and chronic GVHD.

As such, patients presenting with typical findings of acute GVHD prior to day 100 are considered to have "classic acute GVHD," whereas patients presenting with the same findings after day 100, typically upon reduction of immunosuppression, are categorized as having "late onset acute GVHD" .

Some clinicians also use the terms "early onset acute GVHD" or "hyperacute GVHD" to describe symptoms of acute GVHD occurring within 14 days of transplant .

The skin, gastrointestinal tract, and liver are the principal target organs in patients with acute GVHD. This was illustrated in a randomized prospective study of acute GVHD prophylaxis in 329 patients undergoing allogeneic HCT, of whom 110 developed grade II to IV acute GVHD as diagnosed by consensus criteria developed prior to the NIH criteria .

Involvement of the skin, gastrointestinal tract, and liver were seen in 70, 74, and 44 percent, respectively.

Further division of organ involvement was reported as:

- Gastrointestinal tract only – 17 percent
- Gastrointestinal tract and skin – 24 percent
- Gastrointestinal tract, skin, and liver – 24 percent
- Gastrointestinal tract and liver – 9 percent
- Skin only – 15 percent
- Skin and liver – 7 percent
- Liver only – 4 percent

عوارض زود هنگام پیوند سلول بنیادی

بابک نجاتی؛ تبریز

(خون و سرطان بزرگسالان)

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TU MS
Publishing Group

Background: This study investigated the psychometric properties of the 9-Item Shared Decision-Making Questionnaire (SDM-Q-9) and the 9-Item Shared Decision-Making Questionnaire–Physician version (SDM-Q-Doc) using comprehensive and thorough psychometric methods in an oncology setting.

Methods: Cancer survivors (n=1783; 928 [52.05%] males) and physicians (n=154; 121 [78.58%] males) participated in this study. Each cancer survivor completed the SDM-Q-9. Physicians completed the SDM-Q-Doc for each of their cancer patient. Confirmatory factor analysis (CFA) and Rasch model were used to test the psychometric properties of SDM-Q-9 and SDM-Q-Doc.

Results: SDM-Q-9 and SDM-Q-Doc demonstrated unidimensional structure in CFA and Rasch model. In addition, the measurement invariance was supported for both SDM-Q-9 and SDM-Q-Doc across sex using the multigroup CFA. Rash analysis indicates no differential item functioning (DIF)across sex for all the SDM-Q-9 and SDM-Q-Doc items. SDM-Q-9 and SDM-Q-Doc items. SDM-Q-9 and SDM-Q-Doc were moderately correlated ($r=0.41$; $P<0.001$)

Conclusion: SDM-Q-9 and SDM-Q-Doc are valid instruments to assess shared decision making in the oncology setting.

روز دوم پنجشنبه ۱۱ اسفند

پانل سلول درمانی

پیوند سلول بنیادی در آنمی اپلاستیک

علی قاسمی؛ مشهد

(خون و سرطان کودکان)

Haploidentical donor transplants for severe aplastic anemia

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Acquired severe aplastic anemia (SAA) is a rare hematologic disease associated with significant morbidity and mortality. Immune destruction of hemopoietic stem cells plays an important role in pathogenesis,

Severity can be determined by neutrophil counts: patients with 0 to 0.2, 0.21 to 0.5, and .0.5 polymorphonuclear cells (PMNs) 109/L are classified, respectively, as very severe, severe, and nonsevere aplastic anemia and severity has been a strong predictor of survival in
Patients.

If an HLA-matched family donor is identified, marrow transplantation should be the first-line therapy in patients younger than 40 years.

Current international guidelines suggest the use of immuno- suppressive therapy (IST), antithymocyte globulin (ATG) and cyclosporine c (CsA) as first line therapy for severe aplastic anemia (SAA) patients who lack an human leukocyte antigen (HLA) identi- cal sibling, or in patients over the age of 40 . In very young patients, upfront alternative donor transplantation has been reported to be successful.

A very recent paper compares the outcome of haplografts in a pediatric population

Several transplant platforms have been tested, to overcome graft severe rejection and graft vs host disease (GvHD): these include differences in the conditioning regimen, in graft source and graft manipulation, and in GvHD prophylaxis. The latter include ex vivo T-cell depletion and/or antithymocyte globulin and/or high dose post-transplant cyclophosphamide.

Some programs also include the use of marrow or cord blood mesenchymal stem cells, infused at the time of transplantation.

Haploidentical transplants should be considered experimental, and are being used in severe cases lacking a suitable matched donor or CBunit.

Some data suggest that HID HSCT could be an effective alternative treatment option for SAA adults, and additional prospective studies are necessary

In children and adolescents suggest that frontline haplo-HSCT may be a better treatment than IST with SAA who lack an HLA matched donor.

Human skin-derived precursor cells (hSKPs): an accessible resource for cell therapy

علی مصطفایی؛ کرمانشاه

(ایمنی شناسی)

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Human skin-derived precursors (hSKPs) are multipotent and accessible stem cells with ability to differentiate into different cell types. Herein, we reported the isolation and expansion of human skin-derived precursors followed by their differentiation into neurons, glial cells, smooth muscle cells, melanocytes and functional insulin producing clusters (IPCs) *in vitro.* The results demonstrated that SKPs exhibit strong differentiation potential depending on the induction protocols. Our data suggest that hSKPs are potential candidates for cell-based therapy ascribed to their abundance, ease of access, and multipotency. However further investigations and assessments must be addressed before hSKPs clinical applications.

Key words: Human skin-derived precursors, Neurons, Glial cells, Smooth muscle cells, Insulin producing clusters

Emerging and personalized cellular therapy approaches for myeloid leukemia

محمد واعظی؛ تهران

(خون و سرطان بزرگسالان)

AML (acute myeloid leukemia) is a hematologic malignancy with a generally high mortality. Despite introduction of novel chemotherapy agents, considerable number of cases still remain as resistant or relapsed. Recently, cell therapy and use of gene-modified immune cells has come to attention. Strategies such as using chimeric antigen receptor(CAR) T-cells and high dose natural killer(NK) cell therapy has shown promising results. Since AML cells overexpress several tumor antigens, there are new successful investments in the use of monoclonal (mAbs) in resistant AML. Multiple targets are now being studied, either for monoclonal antibodies or CAR-T cell therapy. There is hope that the combination of allo-HSCT and CAR-T cell therapy (the old master and new arrival in adoptive cellular therapy) may prove to be the key to unlocking relapse refractory AML. Besides, studies on vaccination are promising.

روز دوم پنجشنبه ۱۱ اسفند

پانل بیماریهای عفونی

تشخیص زود هنگام سپسیس

محمد حسین زمانیان ؛ کرمانشاه

(بیماریهای عفونی و گرمسیری)

Sepsis is a medical emergency warranting immediate and aggressive treatment.
Heterogeneous syndromeOrganism, associated virulence factors, and site of infection
Patient genetics
Patients comorbidity

Judicious (restricted) fluid strategyEarly vasopressors
Assess fluid responsiveness

Physiologic basedresuscitation
Frequent reassessment of interventions and treatment

Vaccination in Hematopoietic Cell Transplantation (HCT)

بابک صیاد ؛ کرمانشاه

(بیماریهای عفونی و گرمسیری)

Babak Sayad

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Hematopoietic cell transplantation is increasingly used as consolidation therapy in many serious diseases. Immune deficiency following hematopoietic cell transplantation predisposes the patient to potentially deadly infections. Therefore, prevention of infections in HCT recipients is of major importance to improve their outcome. Prevention strategies include lifestyle modification, antimicrobial prophylaxis, preemptive therapy and immunization. Revaccination after HCT has a crucial role in the patients, but vaccination of candidates before transplantation, donor vaccination and vaccination of family members and health care providers can be effective in preventing infections in HCT recipients. Immunization with inactivated vaccines such as DTP, Hemophilus influenzae serotype B conjugate, Pneumococcal, Inactivated poliovirus, Influenza and Hepatitis B is safe after transplantation and is an effective way to reinstate protection from important pathogens whose risk of infection is increased by the transplant procedure. The response to vaccines in patients with HCT is usually lower than that in healthy individuals of the same age during the first months after transplantation but the time of revaccination is recommended at six months post-HSCT, when B-cells start reappearing after transplant. The use of live attenuated vaccines should be limited to specific situations because of the risk of vaccine-induced disease. Adherence of patients to vaccination schedule is important and could be enhance by having a data manager or nurse coordinating the vaccination times and alerting the treating physician at the time of consultation. Finally, the appropriate insurance coverage for the vaccination program is mandatory in these patients.

ژنوتایپینگ سیتومگالوویروس در بیماران پیوند کلیه در ایران

بیژن نعمانپور؛ کرمانشاه

(میکروب شناسی بالینی)

Distribution of cytomegalovirus genotyping in Iranian kidney transplant patients by Real-Time PCR

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Objective: The human cytomegalovirus (HCMV) is a common pathogen responsible for asymptomatic and persistent infections in healthy individuals. However, cytomegalovirus infections are a major cause of morbidity and mortality in immunocompromised patients, especially in recipients of solid-organ transplants.

Methods: We have developed a real-time genotyping and quantitative PCR (RT-GQ-PCR) assay to genotype Cytomegalovirus (CMV) and quantify viral loads simultaneously in kidney transplant recipients. Special minor-groove DNA-binding probes were designed based on sequence polymorphism in the gB and gH genes to increase genotyping specificity for gB1 to gB4, gH1 and gH2. Up to 58 blood samples were from kidney transplant patients and were investigated by ELISA. HCMV DNA from patients who received kidney transplants between 2012 and 2015 were done for PCR (RT-GQ-PCR).

Results: The distribution of gB genotypes was as follows: gB1, 40.6% of patients; gB2, 15.6%; gB3, 28.2%; gB4, 15.6%. gH1, 58% of patients and gH2 were detected in 42%. Mixed-genotype infections were detected in 9.7% (3/31) of the samples. Patients with mixed-genotype infections had significantly higher Creatinine than those with single-genotype infections (P 0.005).

Conclusion: Our result showed that CMV infection is viral genotype specific impact. It seems that due to the genetic diversity of the virus and mix the impact of infection on clinical symptoms relying on serological methods to detect viruses is not enough molecular techniques such as Real Time PCR so accurate, sensitive and rapid is virus detection and determination of specific genotyping.

Key words: HCMV genotype, Real-Time PCR, kidney transplants,

Oral care in hematopoietic stem cell transplantation

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Abstract

Background: Oral and maxillofacial side effects of Chemotherapy (CHT) and hematopoietic stem cell transplantation (HSCT) are with significant morbidity and potential mortality. Theses complications accentuate the importance of oral care in hematology and oncology treatments.

Objectives: Review and Categorize oral care is mandatory to achieve a comprehensive perspective of diagnosis and management of oral problems in Hemato-oncology patients. Although scientific evidences support some of clinical practices, diagnosis and management of these complications varies from patients to patients.

Methods: The following presentation summarizes the most recent comprehensive evidences of management of oral CHT/HSCT complications with some case reports.

Conclusion: Using these fundamental elements, we developed a protocol to assist the health care provider and present a practical approach for basic oral care. Further research is necessary to enhance this clinical protocol.

روز دوم پنجشنبه ۱۱ اسفند

سمینار پرستاری

گزارش عملکرد بخش پیوند مغز استخوان

مجتمع بیمارستانی امام رضا (ع)- کرمانشاه

محمود فخری

(کارشناس ارشد بهداشت جامعه عضو هیات علمی

معاونت توسعه و برنامه ریزی مجتمع بیمارستانی امام رضا (ع))

Function of bone marrow transplantation center in Imam Reza hospital ,Kermanshah ,Iran

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During last 5 years in BMT ward at Imam Reza hospital of Kermanshah 142 successful case of bone marrow transplantation done. 66.37 % of patient done autoloug transplantation and 3863% done allogen transplantation. From this cases 29.84% of patient are women and 70.16% are men 33.87% are uneducated and others are respectively 28.84% under diploma 18.55% diploma ,7.26% of patient were alliterated,8.87 % were under the diploma and the rest of patient had college degrees. The average age of patient was 41-50 year old. MNC taken from patients in 26.42% of patients 3-5,in 50% of patients 6-8,19.81% of patients 9-11 and in the 3.77% of patients was more than11 .the blood group in the 37.1% of patients was A

In the 19.35% was B, in the 9.68% of patients was AB and 33.87% of patients was O . 91.13% of the patients was RH+ and the other was RH-. Chimerism hematopoietic in the 100% of patients was 90%.

From all of transplanted patient 45.16 % affected by multiple myeloma, 16.13% Hodgkin's lymphoma 8.06% nonhodgkins lymphoma ,20.97% AML, 4.84% ALL and 2.42 % myelofibrosis ,Aplastic anemia 2.42%, Fanconi anemia 1%.

90 % of patients before transplantation have not recurred. In 97.25% of patient's, cell separation done just once. In 2.75 % of patient cell separation done twice.

Obtained MNC average of patients was 6-8 %.

Key word : BMT transplant,cancer , patients

نکات کلیدی آموزش به خانواده و
بیماران کاندید پیوند مغز استخوان

شکوه ورعی
(دکتری آموزش پرستاری
مدیر پرستاری دانشگا ه تهران
عضو هیات علمی)

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Patient and family education involves various stages of treatment, which are categorized as on-arrival, in-hospital, and discharge training. The first stage of training is the preparation phase. At this point, educating the patient and family about the conditions for initiating treatment such as chemotherapy and radiotherapy to the whole body. Explain why and how long this treatment will take. The second stage of training is hospital admission. This includes patient coverage, bedding, toiletries, and oral hygiene, equipment that may or may not bring with you to the hospital. The third stage is about hospital routines such as diet, medication, water and electrolyte balance, personal hygiene, vital signs and nursing assessment, activity, risk of falls, spiritual care, visitor guidance, and hand hygiene. The fourth stage is transplantation training about transplant day and its complications like (nausea, vomiting, diarrhea, bleeding, oral ulcers, infection and neutropenia, hair loss, pregnancy and infertility, graft-versus-host disease, transplant rejection. The fifth stage is about the role of care and support centers for patients in need of transplantation and the role of families in patient care, how to deal with sick, control of stress and anxiety, time of return to work or school and how and when they could start their social activity. The sixth stage is the time of discharge. The training is about self-care and family support for transplanted patients at home who should provide all the necessary home facilities for these patients. Much of this phase's education on nutrition, skin care, personal hygiene, infection control, bleeding prevention, activity and exercise, sexual activity, fertility, and emergency conditions requires prompt intervention by health care teams. This article will try to explain in more detail the key points of patient education and their families.

Keywords: Patient education, Family education, Bone marrow transplant

مراقبت های پرستاری در انواع GVHD

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مقدمه و هدف: بیماری پیوند علیه میزبان (GVHD) یک عارضه شایع در پیوند آلوژنیک مغز استخوان است. در واقع این حالت زمانی رخ می دهد که گیرنده پیوند، به لحاظ سیستم ایمنی بسیار تضعیف شده است. GVHD به دو نوع اصلی است: نوع حاد در محدودهٔ ۱۰۰ روز از آغاز پیوند سلول بنیادی آلوژنیک تشخیص داده می‌شود، و به طور معمول در فاصلهٔ ۲ تا ۳ هفته پس از آغاز روند درمان بروز می‌کند. نوع مزمن اغلب اوقات در بیمارانی بروز می‌کند که تجربهٔ GVHD حاد را از سر گذرانده‌اند. این عارضه در عین حال قادر است تا به دستگاه‌های مختلف بدن مثل التهاب پوست, مشکلات دستگاه گوارش(تهوع و اسهال), ریه‌ها و کبد(یرقان) آسیب برساند.

مراقبت پرستاری با رویکردی جامع برای بیماری پیوند علیه میزبان ارائه می شود و بر ارتقای کیفیت زندگی بیمار مبتلا به بیماری مزمن و صعب‌العلاج و خانواده وی تا مراحل پایانی آن متمرکز است. به علت تغییر کیفیت زندگی بیماران پیوند علیه میزبان نیازمند دریافت خدمات مراقبت تسکینی خواهند شد. مطالعه حاضر با هدف مروری بر مراقبت های جامع و انسان گرایانه، رویکردی مهم در مراقبت انسانی متمرکز بر جسم و روان بیمار انجام گردید.

روش پژوهش:جمع آوری داده ها به صورت جستجوی عمیق منابعی بود که استفاده از مراقبت پرستاری را به عنوان یک روش برای توجه به نیازهای بیماران در ابعاد جسمی، روانی و اجتماعی در بیماران پیوند علیه میزبان مورد بررسی قرار داده است. کلمات کلیدی مانند مراقبت پرستاری, مراقبت تسکینی, بیماری پیوند علیه میزبان , پیوند مغز استخوان و پیوند سلول‌های بنیادی خون محیطی با سایر کلمات مانند سرطان و نقش پرستار همراه بودند .جستجو بر روی تشخیص سرطان خاص، جنسیت یا گروه سنی تمرکز نکرد. منابعی که مطالعات تحقیقاتی انجام ندادند، از قبیل مقالاتی که در مورد نظرات مراقبت به عنوان یک روش درمانی معتبر و روایات بیمار نوشته شده بودند، حذف شدند. جستجو در پایگاه های Cochrane ، PubMed و CINAHL انجام شد.چهار منبع با استفاده از ککررین،پنج مورد با استفاده از PubMed و سه مورد با استفاده از CINAHL یافت شد.

بحث و نتیجه گیری: نتایج مطالعه در زمینه مراقبت پرستاری در بیماران پیوند علیه میزبان نشان داد که مراقبت دقیق از بیمارانی که متحمل پیوند سلول های بنیادی شده باشند می تواند به نحو چشمگیری نتایج درمانی مربوط به بیماران را بهبود ببخشد. شواهد به وضوح نشان دهنده اثربخشی مراقبت پرستاری بر کیفیت زندگی بیماران پیوند علیه میزبان موجب تسهیل روند بهبودی سلامت جسمی، روانی و اجتماعی است.

اورژانس های پیوند مغز استخوان و
نحوه برخورد با آنها

اشرف السادات موسوی
(کارشناس پرستاری
سرپرستار بخش پیوند مغز استخوان
بیمارستان شریعتی تهران)

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Nursing care of blood and marrow transplantation patients is complicated. Nursing considerations of BMT patients with complication require an additional set of skills and knowledge that include side effects, both expected and less common, assessment skills, treatment administration, both standard and novel, and acute or intensive care.

Stem cells are immature cells that produce all of the blood cells in your body—the white blood cells that fight infection, red blood cells that carry oxygen, and platelets that help control bleeding. Your stem cells are constantly dividing and changing into these different types of blood cells in your body, replacing older blood cells. A very small number of stem cells circulate in your bloodstream.

Before your transplant, you will receive treatment to prepare your body for the transplant, even if your disease is in remission

Side Effects from Stem Cell Transplant

- Neutropenia
- Anemia
- Thrombocytopenia
- Risk of Infection
- Graft versus host disease
- Runny nose
- Congestion
- Cough
- Temperature of 100.4° or higher
- Nausea
- Vomiting
- Diarrhea
- Toothache
- Open wound

In conclusion, nursing care of BMT patients with emergency complication requires unique knowledge and skills that go beyond basic nursing care of medication administration, procedures, skin care, teaching, coordination of care, and evaluation of therapy. Nurses need to assist patients and caregivers to cope with this complication of BMT and the care requirements.

اصول کاتتر گذاری در بیماران تحت پیوند مغز استخوان

محمد رضا رضایی

(متخصص طب اورژانس ، عضو هیات علمی)

کاتتر ورید مرکزی مستقیما از طریق پوست در ورید های مرکزی از قبیل ورید ژوگولار، ساب کلاوین و فمورال تعبیه میشود. از کاتتر برای دسترسی به عروق بزرگ جهت انفوزیون مایعات ،تزریق دارو ،مانیتورینگ همو دینامیک ،تغذیه وریدی،همودیالیز و غیره استفاده میشود. در صورت عدم دستیابی به عروق محیطی با وجود تلاش های متعدد مورد استفاده قرار میگیرد گرچه استفاده از کاتتر های ورید مرکزی در پزشکی مدرن امروزی نقش بسزایی داشته و باعث کاهش زمان بستری بیماران میشود لیکن از طرف دیگربعنوان یکی از عوامل مهم ایجاد مرگ و میر بیماران در بیمارستان نیز به شمار میرود . هدف از این مقاله اینکه پرستاران دانش و مهارت لازم را در مراقبت و استفاده از کاتتر ورید مرکزی کسب کنند و پرستاران از یک رویه و اصول یکسان در مراقبت از کاتتر پیروی کنند و همچنین از عفونت و آسیب به کاتتر پیشگیری کنند.

کلید واژه ها : کاتتر، مراقبت، پرستار، بیمار

روز سوم جمعه ۱۲ اسفندماه

ارائه مقالات پذیرفته شده اساتید

The study of Blood consumption for Stem Cell Transplant Patients in Shahid Ghazi Tabatabaei Hospital, Tabriz, Iran

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Background And Objective: Haematopoietic stem cell transplant is a potentially curative treatment option in various benign and malignant haematological diseases. Patients undergoing stem cell transplant procedure require blood transfusion on a daily basis. Currently, there is paucity of data from developing countries on transfusion practices. This audit was undertaken to determine the consumption of packed red blood cells (PRBCs) transfusion in the bone marrow transplant unit of the Shahid Ghazi Tabatabaei Hospital, Tabriz, Iran.

Subjects And Methods: A retrospective audit was conducted for packed red cell transfusion ordering practice over a period from March 2017 to march 2018. All consecutive patients, admitted for stem cell transplant procedure for various underlying diseases were included. Outcome measures used in this study were (i) cross match to transfusion (C: T) ratio and (ii) transfusion trigger.

Results: During the study period, n=13 patients underwent haematopoietic stem cell transplant. There were n=10 males and n=3 females. One patient was less than 15 years of age while rests were adults. Median age±SD was 26.5±14.5 years (12~54 years). The underlying diagnosis included Aplastic anemia (n=4), Thalassemia major (n=1), Multiple Myeloma (n=3), Acute leukemia (n=3), Hodgkin's lymphoma (n=1), PRCA (n=1). Grand total consumption of PRBCs during the study period was 204 while 258 products were crossmatch. The C:T ratio was 1.26. The transfusion trigger was Hb level of less than 8 gr/dl.

Conclusion: The results of our BMT unit indicate that the C:T ratio and transfusion trigger is comparable to the international criteria and pioneer country in BMT transplantation. Also we hope that our blood consumption become less than it is now.

Keywords: Blood consumption, C: T ratio, PRBCs, Stem cell transplant, Tabriz, Iran

Application of adipose derived stem cell in tissue regeneration

Mozafar khazaei

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In recent years, adipose derived stem cells (ASCs) are most commonly used in the clinical applications. ASCs are multipotent stem cells and express the typical surface markers of mesenchymal stem cells (MSCs) which are easily obtained from the enzymatic digestion of adipose tissue. ASCs as MSCs have potentials to differentiate into multiple lineages, and they are safe to apply to the treatment of various diseases in regenerative medicine such as cardiac-related diseases, neurodegenerative diseases (Alzheimer, Parkinson, and traumatic brain injury), diabetes, amyotrophic lateral sclerosis, intervertebral disc, multiple system atrophy, sport injuries. Adipose tissues contain an abundant amount of stem cells compared to bone marrow and are useful source for harvesting ASCs. Processes of ASCs preparation have been refined to greatly contribute to the quality and quantity of ASCs prior to injection or transplantation. Researches on ASCs are about to provide more evidence for the safety and efficiency of using ASCs in clinic application instead of bone marrow stem cells and the number of clinical trials on ASCs is going to increase by years; however, most trials are in phase I and II. Recent studies were used three-dimensional culture with natural or synthetic scaffolds instead of ordinary two-dimensional cell culture. Modification of the scaffold components and characteristics drives ASCs location, proliferation, and differentiations into a specific cell line are important issues in tissue regeneration.

Infection profile of patients undergoing autologous bone marrow transplantation in Tabriz, Iran

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Background And Objective: Hematopoietic stem cell transplantation (HSCT) has been widely used for treating oncological and hematological diseases. Although HSCT has helped to improve patient survival, the risk of developing infection during hospitalization is an important cause of morbidity and mortality. This study aimed to analyze the infection profile during hospitalization and the associated risk factors among patients undergoing autologous HSCT at the University Hospital, Shahid Ghazi Tabatabaei Hospital, Tabriz, Iran.

Subjects And Methods: This was a cross-sectional study on patients undergoing autologous HSCT at a public university hospital.

Methods: Patients with febrile neutropenia between 2015 and 2018 were retrospectively evaluated regarding their infection profile and associated risk factors. This survey included: bacterial culture and blood culture on specific media.

Results: Infection occurred in 57.2% of 56 patients with febrile neutropenia. The main source of infection was the central venous catheter (25.9%). Infection was chiefly due to Gram-positive bacteria, although Gram-negative-related infections were more severe and caused a higher death rate. Sex, age, skin color, nutritional status and underlying disease were not associated with the development of infection. Patients with severe mucositis (Grades III and IV) had a higher infection rate ($P < 0.001$). Patients who developed pulmonary complications during hospitalization had higher infection rates ($P = 0.002$). Infection was the main cause of death (57.1%) in the study sample.

Conclusion: Strategies aimed at reducing infection-related mortality rates among patients undergoing autologous HSCT are necessary.

Key Words: Hematopoietic stem cell transplantation, autologous bone marrow transplantation, Infection profile, Tabriz, Iran

results of allogenic haploidentical compare with match sibling transplant

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The effects of HLA-identical sibling donor (ISD) hematopoietic stem cell transplantation (HSCT) on adults with intermediate- or high-risk acute myeloid leukemia (AML) in the first complete remission (CR1) are well established. Previous single-center studies have demonstrated similar survival after unmanipulated haploidentical donor (HID) vs ISD HSCT for hematologic malignancies. To test the hypothesis that haploidentical HSCT would be a valid option as postremission therapy for AML patients in CR1 lacking a matched donor, we designed a disease-specific, prospective, multicenter study. Between July 2010 and November 2013, 450 patients were assigned to undergo HID (231 patients) or ISD HSCT (219 patients) according to donor availability. Among HID and ISD recipients, the 3-year disease-free survival rate was 74% and 78% (P = .34), respectively; the overall survival rate was 79% and 82% (P = .36), respectively; cumulative incidences of relapse were 15% and 15% (P = .98); and those of the nonrelapse-mortality were 13% and 8% (P = .13), respectively. In conclusion, unmanipulated haploidentical HSCT achieves outcomes similar to those of ISD HSCT for AML patients in CR1. Such transplantation was demonstrated to be a valid alternative as postremission treatment of intermediate- or high-risk AML patients in CR1 lacking an identical donor.

Nurses roles and capabilities in the care of haematopoietic stem cell transplantations patients

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Nurses as a member of the multi-professional team caring for patients undergoing stem cell transplantations play crucial roles. Nurses as core professionals along physicians and other healthcare workers care for patients and their families around the clock. Providing care for in-patients and follow up care for these patients are vital to patients' satisfaction.

Nurses play various roles in a different phase of treatment of these patients. Nurses could be an educator in the preparation phase for transplantation. They also work as a caregiver and treatment team coordinator and communicator to collect and widespread patient-related information among the multi-professional team who are working together. Nurses also can provide social and spiritual care for these patients. After the acute phase of treatment, nurses could be a professional who provides information regarding treatment side effects and the times the patient should call their doctor. Furthermore, nurses as a researcher can provide evidences for improving quality of care in these patients. Finally, they can contribute to local, national and international professional society to enhance their professional knowledge related to caring of patients undergoing HSCT treatment.

Hematopoietic stem cell transplantation for HIV cure

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Protection of central memory T cells from HIV infection could be a critical basis of achieving a practical cure. The obvious cure of an HIV-infected person following hematopoietic stem cell transplantation (HSCT) from an allogeneic donor homozygous for the ccr5Δ32 mutation has enthused the search for strategies to eradicate HIV or to induce long term reduction without requiring enduring antiretroviral therapy. A variety of approaches, including allogeneic HSCT from CCR5-deficient donors and autologous transplantation of genetically modified hematopoietic stem cells, are currently under investigation. HIV cure can only be attained if the virus is eliminated from reservoirs in resting T cells and possibly other hematopoietic cells. This approach has attracted the interest of investigators for many years but, to date, has resulted in only a merely successful outcome.

Ellagic acid Improve Testicular Dysfunctional via Autophagy in Tamoxifen-Injured Rat

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Tamoxifen (TAM, an antiestrogenic drug) induce azoospermia and testicular atrophy. Contrawise, ellagic acid (EA, a phenol present in vegetables) is a natural antioxidant which may improve evolution of spermatogenesis while having a high biological safety, thus potentially being useful for the treatment of TAM toxicity in reproductive health protection. Hence, this current study aimed to explore the roles of EA on spermatogenesis through autophagy of TAM-induced-toxicity. For this, rats were orally challenged as follows: TAM [0.6 mg/kg body weight (b.wt.) per day], EA (5 mg/kg b.wt. per day) alone or in combination form for 48 consecutive days. Considering the vehicle group, TAM-injured animals showed significantly lower body weight, food intake, testicular weight and volume, testosterone and LH levels, and testicular cells count ($p<0.05$). TAM induced testicular damages and seminiferous tubular atrophy. Monodansylcadaverine assays mimicking the histopathology observations. All these changes were abolished by EA treatments. Meanwhile, TAM upregulated autophagic marker genes including Atg7, LC3, Atg13, Atg14 and Beclin1 expressions. However, p62, the substrate protein of evolutionarily conserved self-digestion process of autophagy, was also upregulated by TAM administration. These results revealed that EA significantly promoted autophagosomes formation via downregulation of the autophagic genes; the blockage of autophagosomes degradation that might be due to p62 aggregation. Thus, this study provides a novel mechanistic approach with respect to TAM-induced male reproductive toxicity.

Key words: Autophagy, p62, Reproductive health, Tamoxifen, Testicular dysfunction

نقش آزمایشگاه در پیوند سلول‌های بنیادی خونساز

علی ملکی

متخصص هماتولوژی آزمایشگاهی و علوم انتقال خون، عضو هیأت علمی دانشگاه علوم پزشکی کرمانشاه

پیوند سلول‌های بنیادی خونساز (HSCT) به عنوان یک روش استاندارد مراقبت از بدخیمی‌های خونی متعدد درنظر گرفته شده است. انجام موفقیت‌آمیز این رویکرد درمانی نیاز به پشتیبانی خوب توسط یک آزمایشگاه بالینی قوی دارد. این آزمایشگاه باید توانایی انجام آزمایش‌های بالینی مختلف و نیز تحقیقات خاص پیوند را داشته باشد. آزمایشگاه بیولوژی پیوند باید به‌خوبی مجهز باشد و زیرساخت‌های لازم برای انجام تحقیقات مربوط به تایپ بافت، شمارش سلول‌های CD34 به روش فلوسیتومتری، ارزیابی موفقیت یا رد پیوند، ارزیابی حداقل بیماری باقیمانده (MRD) و اندازه‌گیری داروهای سرکوب کننده سیستم ایمنی داشته باشد. اهمیت تست‌های آزمایشگاهی بالینی معمول مانند تست‌های بیوشیمیایی، هماتولوژی، سرولوژی، ادرار و میکروبیولوژی نیز در فرایند عمل پیوند قابل چشم‌پوشی نیست. پایش آزمایشگاهی در هر مرحله از روند پیوند اهمیت داشته و به تشخیص زودهنگام، پایش به موقع و درنتیجه بهبود در پیشگیری و درمان پیامدها یا عوارض جانبی پیوند کمک می‌کند. تهیه و فراهم‌سازی اطلاعات مرتبط با پیوند، کایمریسم، تشخیص عفونت‌ها، بیماری‌های انسداد عروقی، مسمومیت‌های مرتبط با درمان، بیماری پیوند علیه میزبان (GVHD) و اختلالات ترومبوتیک میکروآنژیوپاتیک که مهمترین عوامل مرگ و میر و عوارض HSCT می‌باشند، ضروری است. در این مقاله به اهمیت آزمایشگاه در جنبه های مختلف HSCT پرداخته خواهد شد.

آدرس مکاتبات:

کرمانشاه، خیابان دولت آباد، دانشکده پیراپزشکی، گروه علوم آزمایشگاهی

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An Intelligent Clinical Decision Support System for Predicting pre-occurrence of a GVHD following Allo-HSCT

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Background/Objective: Acute graft-versus-host disease (aGVHD) is a complex, often multisystem disease that causes significant morbidity and mortality in hematopoietic transplant patients. This study aimed to develop a clinical decision support system (CDSS) to predict pre-occurrence of aGVHD following Allo-HSCT.

Methods: This study was conducted in Tehran, Iran, on patients who underwent Allo-HSCT in 2009–2016 in Taleghani hospital. Initially, variables affecting aGVHD were identified using the literature review. Patients' data were extracted from hospital electronic and paper-based medical records. Then, two classification algorithms of machine learning, including (XGBClassifier and HistGradientBoostingClassifier) were developed and evaluated for prediction of aGvHD in transplantation day.

Results: Factors including albumin, uric acid, CRP, donor age, platelet count, LDH, and haemoglobin were considered important factors for predicting pre-occurrence of aGVHD. A CDSS was developed with these variables. The mean of accuracy, sensitivity, and specificity of the transplantation day prediction system in the test data were 90.7%, 92.5%, and 89.1%, respectively.

Conclusions: Using the CDSS designed, we could accurately predict the pre-occurrence of aGVHD in transplantation day.

Keywords: Allo-HSCT, aGVHD, Machine learning, Prediction

روز سوم جمعه ۱۲ اسفندماه

ارائه مقالات پذیرفته شده دانشجویی

Effective Chemo-mobilization Method for Collection of Peripheral Blood Stem Cells in Patients with Multiple: A Cross-sectional Study

Mohammad Hasan Karamian

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Background: Multiple myeloma (MM) is one of the most important hematological malignancies. The primary treatments for MM mainly target inhibition of cellular proliferation and inducing apoptosis (chemotherapy). On the other hand, the hematopoietic stem cell transplantation has been known as a main treatment. In the patients with MM who are in the remission phase, the peripheral blood stem cells transplantation (PBSCT) is the next target. As it has been shown, one of the most important success predictors of PBSCT is the CD34+ cell count in the apheresis product.

Methods: This cross-sectional study was performed between Jun 2018 and Jun 2019 in Imam-Reza Hospital, Kermanshah, Iran. It was aimed to evaluate the efficacy and safety of stem cell mobilization using cyclophosphamide (CY;3.0 g/m2 on day 1) combined with granulocyte-colony stimulating factor (G-CSF; 10 µg/kg/day, subcutaneously) in patients with MM were compared. After signing a consent form, 13 patients were mobilized with a combination of CY and G-CSF, and 30 same age- and sex-matched patients were mobilized with G-CSF (10 µg/kg/day, subcutaneously). The apheresis was performed using SpectraTM Optia® apheresis software with continuous mononuclear cell (CMNC) procedure.

Results : The median number of total collected CD34+ cells were significantly higher in the Chemo-mobilized group than the only G-CSF treated patients (22×106 CD34+/kg vs. 9.6 × 106 CD34+/kg, P< 0.001). The rate of mobilization failure (defined as < 2.0 × 106 CD34+ cells/kg) was lower in the Chemo combined group than in the only G-CSF group (1.6% vs. 8.8%, P = 0.062). Six infections during the mobilization period were more frequent in the CY group than in the G-CSF group (18.5% vs. 7.9%, P = 0.117).

Conclusion

Taken to gather, it seems that an intermediate dose of CY with G-CSF is more effective and tolerable chemo-mobilization method than single therapy with G-CSF.

Keywords: Peripheral Blood Stem Cell, Stem Cell Transplantation, Apheresis, Multiple Myeloma

Programmer exosomes in immunotherapy

زهرا نیریزی

اگزوزوم ها وزیکول های غشایی در ابعد نانومتری هستند که از انواع مختلف سلول ها ترشح و استخراج میشود ، اگزوزوم ها با الحاق به سلول های هدف ، انتقال رسپتور های غشایی و یا تحریک مستقیم سلول از طریق رسپتور های سطحی آنها ، نقش مهمی در ارتباط بین سلولی ایفا میکنند .

سازگاری بالا و ایمونوژنیسیته ی پایین اگزوزوم ها از عوامل گسترش آنها در روش های درمانی است ؛ بیان tetraspanin CD9 الحاق سریعتر اگزوزوم به غشای سلول هدف را موجب می شود و CD47 در سطح اگزوزوم ، آنرا از فاگوسیتوز توسط سیستم فاگوسیتی حفظ میکند.

مطالعات پره کلینیکال و کلینیکال زیادی، تاثیر چشمگیر و بی خطر بودن درمان براساس اگزوزوم را دربیماری هایی همچون سرطان ، بیماری های ایسکمیک ، اختلالات ایمنی و بیماری های عصبی نشان داده اند ، اخیراً انواعی از اگزوزوم ها تحت عنوان synthetic multivalent antibodies retargeted exosomes (SMART-Exos) گسترش یافته اند که در تعدیل ایمنی سلولی و کنترل سیستم ایمنی موثرند .

این نوع از اگزوزوم ها با نمایش همزمان دو نوع از مونوکلونال آنتی بادی ها که اختصاصی CD3 و EGFR به ترتیب بر سطح T-cell و cancer cell-associated EGFR هستند ، باعث تقویت ایمنی علیه سرطان در in vitro و invivo میشوند .

در مطالعات اخیر استفاده از این نوع اگزوزوم در سرطان پستان برای القای قدرتمند و انتخابی ایمنی علیه سلول های HER2 مثبت منجر به ایجاد کلاس جدیدی از ایمونوتراپی برای این نوع از سرطان شد ، به طوریکه نتایج نشان می دهند این نوع از اگزوزوم میتواند رویکرد جدید و جامعی را برای نسل بعدی ایمونوتراپی فراهم کند

World Marrow Donor Association International Standards for Unrelated Hematopoietic Stem Cell Donor Registries

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More than 25,000 hematopoietic stem cell transplantations (HSCTs) are performed each year for the treatment of lymphoma, leukemia, immune-deficiency illnesses, congenital metabolic defects, hemoglobinopathies, and myelodysplastic and myeloproliferative syndromes. (HLA)-matched HSCT is commonly the preferred type of transplantation, with HLA-matched sibling donors usually the first choice. The probability that two siblings are acceptable matches is one-fourth. If there is no related HLA-matched donor, unrelated matched donors are considered.

The widespread availability of volunteer donors was made possible by the establishment of registries. Registries from different countries joined and established world and international donor associations and groups to facilitate finding a suitable donor and improve the HSCT outcomes from unrelated donors.

The World Bone Marrow Donor Association (WMDA) (http://www.worldmarrow.org/) started in March 1988 in the form of a committee to establish an international partnership to identify non-related donors. WMDA Standards are aimed at enhancing the quality of unrelated hematopoietic stem cell donor registries assisting the grafting physician responsible for patient treatment in the international search for an unrelated donor for their patient. The WMDA Standards promote the quality of procedures necessary to obtain, in the shortest possible time, the appropriate quality and quantity of hematopoietic stem cells (HSC) of the best unrelated donor suitable for engrafting a patient while protecting the anonymity, health and well-being of the volunteer donors. The standards cover: (1) general organization of registries; (2) donor recruitment; (3) donor characterization; (4) information technology; (5) facilitation of search requests; (6) second/subsequent donations; (7) collection/processing/transport of stem cells; (8) follow-up of patient/donor; and (9) financial/legal responsibilities.

Keywords: hematopoietic stem cell transplantations (HSCTs), World Marrow Donor Association (WMDA), Registries, unrelated donor

Immunotherapy approaches in cardiovascular disease

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Introduction: Immunotherapy has been a cutting edge approach in treating cancer of the past decade. Now scientists are wondering if it may extend beyond cancer and serve as an effective treatment for other common illnesses including cardiovascular disease (CVD).this review indicates some type of Immunotherapy: **A**ccording to world health organization, CVD is the leading cause of death word wide. Inflammation is an important regulator of some type of CVD such as atherosclerosis and heart failure (HF).Experimental and clinical data suggest that reducing inflammation without affecting lipid levels may reduce the risk of CVD especially in atherosclerosis. In one type of immunotherapy, crucial pathogenic inflammatory pathways can be targeted by applying specific drugs. Besides the innate immune system, adaptive immunity also plays a crucial role in HF. Effector T cells are detrimental for proper cardiac remodeling after MI. **C**AR T-cell therapy, a rapidly emerging form of immunotherapy using patients' own T-cells, involves genetically modifying these cells in patients.in a first-of-its-kind study, researchers at Penn medicine used this approach to target and remove activated fibroblasts that contribute to the development of cardiac fibrosis, a scarring process found in most forms of heart disease. This approach may be a viable treatment option for heart disease.

Material And Methods: This study is performed by using journal's articles (especially including nature, circulation and European heart journals), library studies, electronic resources and data bases such as Pubmed, Google scholar and scopus. Related key words to this study include Immunotherapy, inflammation, cardiovascular disease, heart injury, regulatory T cells and CAR T-cell. According to observations of titles and abstracts, 9 completely related and new original and review articles were found and reported.

Results: The Canakinumab Anti-inflammatory Thrombosis Outcome Study (CANTOS) trial has proven that targeting a pro-inflammatory mediator, interleukin (IL)-1b effectively reduces CVD risk and mortality in patients with atherosclerosis .a sub-study from the CANTOS trial showed that anti IL-1b treatment reduced the number of post-MI patients with hs-CRP levels and also reduced HF related mortality in this patient group, indicating that immunotherapy might be beneficial for a selected group of HF patients. Except IL-1B, Alternative immunotherapeutic targets such as chemokines and their receptors, immune checkpoints, pathways of immune-metabolism, and hormones and lipid mediators, may strongly reduce CVD, while causing less immunosuppressive side-effects than Canakinumab. Despite of beneficial Tregs activation as limiting inflammation after acute MI, in chronic murine ischemic cardiomyopathy Treg plasticity may underlie self-injury and also Treg expansion may potentially exacerbate HF via nonimmune mechanisms. Specifically, Tregs are antiangiogenic and induce endothelial cell (EC) apoptosis. Suppression of effector T-cell responses via regulatory T cells can reduce hypertrophy and fibrosis, systemic inflammation and enhancing tissue neovascularization. Adoptive transfer of T cells that express a chimeric antigen receptor against fibroblast activation protein (FAP, a membrane glycoprotein expressed in certain subclasses of fibroblasts.) results in a significant reduction in cardiac fibrosis and restoration of systolic and diastolic function after injury in mice.

Conclusion: CANTOS, the visualizer of the importance of targeting inflammation, couldn’t improve CVD mortality, and caused an increase in fatal infections. Therefore, the identification of novel drug targets are required to optimize immunotherapy for CVD. Pro inflammatory and antiangiogenic Treg, an essential pathogenic factor in chronic ischemic HF, is a therapeutic target for the resolution of related disease. Although Engineered FAP CAR T-cells decreased cardiac fibrosis and improved heart functions, Researchers note additional studies needed to confirm FAP as the optimal target and to ensure safety risks are minimized. After all although immunotherapy in CVD has experienced numerous limitations in various areas, but a bright future on the horizon of immunotherapy is predictable.

Review on microRNA applications in operative dentistry

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Operative dentistry is a branch of arts concerned with the teeth and associated structures of the oral cavity including prevention, diagnosis, and treatment of diseases and restoration of defective or missing tooth. Its focal point is restoration of the teeth that are damaged as a result of disease, trauma, or abnormal development to a state of normal function, health and aesthetics.

MicroRNAs (miRNAs) represent a class of small, 18 to 28 nucleotide-long, noncoding RNA molecules. Until now, approximately 900 members of the family have been identified in humans. Their major role is in the posttranscriptional regulation of protein expression, and their involvement is demonstrated in normal and in pathological cellular processes. They proved to be effective on several key cellular processes, such as cell differentiation, cell cycle progression, and apoptosis.

The conflux of these subjects has led to some studies manifesting importance of molecular biology in modern dentistry. Among several miRNAs reported:

- miR-720 has been reported to promote odontogenic differentiation and reduce proliferation of dental pulp stem/progenitor cells by repressing Nanog homeobox (NANOG).
- miR-218 has been shown to regulate osteogenic differentiation of human-derived dental stem cells by targeting RUNX2
- miR-146a-5p plays an important role in proliferation and differentiation of Dental pulp stem cells through maintenance of STRO-1
- The miR-34a-5p/AXL axis confers aggressiveness in oral cancer cells through the AKT/GSK-3β/β-catenin/Snail signaling cascade and might represent a therapeutic target for oral squamous cell carcinoma • miR-135b has a potential role in mediating odontoblast-like differentiation of human dental pulp cells by regulating Smad5 and Smad4
- miR-21 has been reported in vitro to mediate stretch-induced osteogenic differentiation of periodontal ligament stem cells and support osteoclast differentiation which is important in alveolar bone remodeling
- miR-204-5p has a critical role in maintaining aggressiveness of head and neck squamous cell carcinoma(HNSCC). This microRNA as a tumor suppressor, which can inhibit tumor growth, metastasis and stemness, is commonly repressed in HNSCC

Complications of Natural killer cell based therapies in solid tumors

Farbod Ghobadinezhad

Natural killer (NK) cells are potent cytolytic lymphocytes belonging to the innate immune system. NK cells comprise up to 15% of all circulating lymphocytes and are also found in peripheral tissues including the liver, peritoneal cavity, and the placenta. Regulation of NK cell activity depends on the repertoire of "germline-encoded" activating and inhibitory receptors. NK cells can recognize tumors that might evade T cell-mediated killing by aberrant human leukocyte antigen (HLA) expression, indicating that NK cells participate in tumor immunosurveillance.
Natural killer-based immunotherapy is a promising strategy for solid and hematologic cancers and it can potentially be combined with chemotherapy, radiation, or monoclonal anti- body therapy.
Despite the progress made in the field of NK-based immunotherapy, there are still many obstacles to eliciting an effective immune response. One major impediment is the ability of tumor cells to activate several mechanisms that lead to tumor escape from NK-mediated killing.
It has become increasingly clear that the tumor microenvironment (TME) plays a crucial role in the impairment of the immune response and in the development of many overlapping mechanisms that create an immunosuppressive microenvironment. Hypoxia, a characteristic feature of advanced solid tumors resulting from defective vascularization and a subsequent insufficient oxygen supply, is considered one of the hallmarks of the TME.
One of the mechanisms which tumor microenvironment uses to evade immune system and impairing NK cells as well as other immune cell types is recruiting immunosuppressive cells such as Tregs, myeloid-derived suppressor cells (MDSCs) and M2 macrophages.
Through the sensing of oxygen level and the transcriptional activity of HIF-1a, hypoxia plays a key role in the reprograming of cancer cell metabolism.
Several metabolites have been studied and are known to play a key role in tumor immune evasions. For example due to the hypoxic condition in TME tumor cells shift glucose and energy metabolism from oxidative to glycolytic metabolism and therefore the levels of lactate elevates in the TME. High levels of lactate will affect NK cells in direct and indirect ways. The direct ways usually down regulate the activating receptors on the surface of NK cells (e.g., NKp46) and also reduce perforin and granzyme B production.
Other metabolites which affect NK cells are adenosine, nitric oxide (which leads to the shedding of MICA [an important ligand for NKG2D], prostaglandin E2 and Galactins.
Several studies have shown that tumor derived extracellular vesicles are playing an important role in immune evasion. Exosomes which contain TGF-B, MICA and MICB will downregulate the NKG2D receptors on the NK cells.
Despite recent advances in cancer immunotherapy, the therapeutic outcome was often disappointing in many clinical protocols. Given the important immunomodulatory effects of the TME, it stands to reason that it may represent a therapeutic target that can be manipulated to improve the anti-tumor immune response. Thus, the first clinical interventions that aim to target the microenvironment to enhance tumor immunity are under active evaluation.

بررسی تاثیر مراقبت های تسکینی در کاهش عوارض پیوند مغز استخوان (یک مطالعه مروری)

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مقدمه: بیماران تحت درمان با پیوند مغز استخوان در معرض عوارض شایعی نظیر درد، تهوع، استفراغ و اظطراب هستند که روند درمان، بهبود و کیفیت زندگی این بیماران را تحت تاثیر قرار می‌دهد. مراقبت های تسکینی غیر تهاجمی تاثیر چشمگیری بر کاهش عوارض ناشی از پیوند مغز استخوان دارد. از مزایای این نوع مراقبت میتوان به عدم بروز عوارض و امکان خودکفایی بیمار برای انجام این نوع مراقبت اشاره کرد.

این مقاله مروری به بررسی مقالات مرتبط با تاثیر مراقبت های تسکینی بر کاهش عوارض شایع در بیماران پیوند مغز استخوان میپردازد.

مواد و روش ها: این مطالعه با استفاده از مطالعات کتابخانه ای، جستجو در مقالات ژورنال ها و پایگاه های اطلاعاتی و منابع الکترونیک با کلید واژه های Palliative Care، Pain، Nausea and Vomiting، Anxiety، Bone marrow Transplantation در پایگاه های داده ای شامل Science Direct, Google Scholar, Pubmed, Clinical Cancer Researchبا زبان انگلیسی و بدون محدودیت زمانی انجام گردید، در مجموع ۳۷ مقاله یافت شد و پس از بررسی عنوان و خواندن چکیده آنان، مقالات کاملا مرتبط به دست آمد و نتایج حاصل از ۸ مقاله مرتبط پس از خواندن متن گزارش شد.

یافته ها : نتایج حاصل از بررسی ۸ مقاله کاملا مرتبط حاکی از آن است که پیوند مغز استخوان در بیماران دارای عوارض شایعی می باشد که با انجام مراقبت های تسکینی غیردارویی نظیر رایحه درمانی، ماساژ درمانی، انحراف ذهنی، موسیقی درمانی و همینطور مراقبت های تسکینی داروئی درد در این بیماران از درجات شدید به درجات متوسط تا خفیف کاهش چشمگیری پیدا کرده و همچنین تهوع، استفراغ و اظطراب در ۴۰ الی ۸۰ درصد بیماران کاهش یافت.

نتیجه گیری : نتایج نشان داد که بیماران تحت پیوند مغز استخوان با عوارض شایعی اعم از درد، تهوع، استفراغ و اظطراب مواجه هستند که با استفاده از مراقبت های تسکینی در این بیماران عوارض تا حد چشمگیری کاهش یافته و کیفیت زندگی و روند بهبود این بیماران تسهیل و تسریع می شود. بهره گیری از این نوع مراقبت ها از سوی تیم درمان و سیاست گذاران امور بهداشتی و ارزشیابی آنها باعث افزایش کیفیت زندگی و بهبود روند درمان این بیماران خواهد بود.

واژگان کلیدی : مراقبت تسکینی، پیوند مغز استخوان، درد، تهوع و استفراغ، اظطراب

سلول درمانی بیماری های مزمن کلیوی

رضوان روشنی گلدسته

دانشجوی پزشکی دانشگاه علوم پزشکی کرمانشاه

مقدمه: افزایش شیوع بیماری های مزمن کلیوی(CKD) به یک مسئله نگران کننده در سراسر جهان مبدل شده است به طوری که ۱۳ درصد مردم دنیا بدان مبتلا هستند.

CKD سندرومی است که منجر به تغییرات دائمی در ساختار و عملکرد کلیه از جمله کاهش شدید تعداد نفرون ها، هایپرتروفی گلومرول ها و تشکیل ضایعات اسکلروتیک میشود. از جمله ریسک فاکتور هایی که سبب ابتلا به CKD میشوند، بیماری های کاردیوواسکولار، دیابت، نفروکتومی، مواد سمی و آسیب حاد کلیوی میباشند.

طبق مطالعات انجام شده، تا به حال از چندین رده مختلف سلول های بنیادی مزانشیمی از جمله سلول های بنیادی مزانشیمی مشتق شده از بافت چربی، سلول های بنیادی مزانشیمی مشتق شده از مغز استخوان، سلول های بنیادی مشتق شده از آمبلیکال کورد و سلول های بنیادی مشتق شده از ژله وارتون استفاده شده است.

مواد و روش ها: این مطالعات به صورت open-lable و single arm یا dose-escalation انجام شده اند و شرکت کننده ها بر اساس معیار های ورود و خروج همراه با فالوآپ های چندین ماهه انتخاب شده که علت های ابتلای آنها به CKD متفاوت میباشد. این سلول ها یا به صورت اتولوگ و یا به صورت آلوژن از بافت های مربوطه جدا شده و در محیط آزمایشگاه کشت و پاساژ داده شده اند؛ سپس به صورت ساب کپسولار و یا تزریق داخل وریدی بر اساس پروتکل های تزریقی یا به صورت تک دوز و یا دوز های چندگانه به بدن وارد شده اند.

در دوره های فالوآپ، ایمنی و قابل تحمل بودن و کارایی(با اندازه گیری میزان GFR و BUN و کراتینین) این تزریق با خط پایه و مدتی قبل از تزریق مقایسه شده است.

یافته ها: به دنبال تزریق داخل وریدی هیچ گونه علائمی از سمیت حاد تزریقی، عوارض سیستمیک ارگان ها، عفونت و یا بدخیمی دیده نشده است؛ بدین ترتیب میتوان تاحد زیادی از قابل تحمل بودن و امنیت تزریق اطمیان داشت.

به دنبال تزریقMSCs، در بافت کلیه آسیب دیده، کاهش آپوپتوز، استرس اکسیداتیو، فاکتور های تخریبی و پیش التهابی، فیبروز و التهاب و افزایش آنژیوژنز، فاکتو های رشد از جمله VEGF و بازسازی اتوژن دیده میشود. چیزی که به در فالوآپ بیماران مشهود است، بهبود چشمگیر در ساختار و عملکرد کلیه و کاهش پروتئین اوری و تثبیت GFR می باشد.

نتیجه گیری: مطالعات انجام شده نشاندهنده ایمنی و قابل تحمل بودن تزریق سلول های بنیادی در بیماری های مزمن کلیوی هستند و یافته های مهمی را برای تحقیقات بعدی مشخص ساخته اند.

علارغم پیشرفت های مشاهده شده در بکارگیری سلول های بنیادی در درمان بیماری های مزمن کلیو ی، تحقیقات برای بکار گیری گستره و تایید آن به عنوان یک روش درمانی جدید هچنان ادامه دارد.

Recent advances in cell sheet technology

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Regenerative medicine is an improving field that challenges diseases and functional impairments. Compared with traditional cell therapies with evident shortcomings (e.g., cell suspension injection or tissue engineering with scaffolds), scaffold-free cell sheet technology enables transplanted cells to be grafted and fully maintain their viability on targets. Clinical and experimental studies have advanced the application of cell sheet technology to numerous tissues and organs (e.g.,heart, liver, kidney, cornea, bladder, oesophagus, trachea, tendon, periodontium, bone and cartilage).

In Cell sheet tissue engineering transplantable two-dimensional (2D) and three-dimensional (3D) tissues and organs are created.The cell sheet technology has shown great clinical potential in regenerative medicine due to its effective preservation of cell–cell connections and extracellular matrix and its scaffold-free nature, moreover cell sheet technology tries to solve some challenges in conventional tissue engineering like graft site inflammation, autoimmunity and mechanical injury.

A variety of systems can be used to construct cell sheets, including temperature-responsive, electro-responsive, photo-responsive, pH-responsive, mechanical, and magnetic systems.With continuous advances in cell sheet technology in recent years, approaches to optimising the preparation of cell sheets have been proposed based on these systems.Although temperature-responsive and mechanical systems are the most widely used systems to prepare cell sheets.

Cell sources for cell sheets are somatic cells ,MSC’s and stem cells.

According to the preparation process, whether specific cells are added, if the sheet is folded, or if it is combined with other tissues or materials, cell sheets are roughly divided into five types: monolayered cell sheet (MCS), co-culture cell sheet (CO-CS), multi- layered cell sheet (MLCS), 3-D culture of cell sheet (3D-CS) and cell sheet fragment (CSF).

In general, cell sheet technology is further advanced than traditional cell therapies and is a very promising regenerative medicine approach. Specifically, it enables replacement of injured tissue, improves function in metabolic and endocrine organs and attenuates a deteriorated environment by effectively delivering various proteins to the affected tissue or throughout the whole body. All cell sheets currently used in the clinical setting are derived from autologous cells. This eliminates the risk of immuno- reactions following transplantation.However, the high cost and time required for preparing each patient-specific cell sheet are mentioned disadvantages.

روز سوم جمعه ۱۲ اسفند ماه

مراقبت های روانی بیمار پیوندی

بقا و انطباق در بیمار پیوند

مهدی شیرزادی فر؛ کرمانشاه

(اعصاب و روان)

psychological aspect in cancer survivors in this lecture Iwill try to talk about the psychological aspects of cancer and evidence-based therapeutic interventions in cancer survivors

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Cancer is a devastating disease causing significant psychological problems among patients and their families. In the past few decades, there have been growing implementation and dissemination of screening methods for the psychological consequences of cancer, including distress, depression, anxiety, post-traumatic stress, and de moralisation. Also, guidelines for the management of psychological distress have been developed and endorsed by a number of scientific cancer associations. This lecture is about some of the most significant related issues, also focusing on recent advances in psychosocial and psycho pharmacological interventions as a part of a mandatory, integrated, and comprehensive approach to cancer care.
sincerely yours dr Mehdi shirzadifar
psychiatrist and fellowship of psychotherapy

تاب آوری پیوند

محمد رضا مقدسی

(دکتری مدیریت)

مایه مسرت و مباهات است که در نهمین کنگره سراسری پیوند سلولهای بنیادی برای نخستین باردر کشور فرصتی دست داد که از تاب آوری روانشناختی هم سخنی به میان آید که عبور موفقیت آمیز از تلخی های روزگار و شرایط نامناسب را نیز همین (تاب آوری) توصیف میکند تاب آوری است که بهترین پیش بینی کننده کیفیت زندگی و سلامت روان است.

بالطبع بیماران پیوند نیز دچار مشکلاتی میشوند که نیازمند مداخلات روانپزشکی و یا روانشناختی باشد چه بسا معدودی از پیش با همین اختلالات و مشکلات دست و پنجه نرم می کرده اند.

فضای روانی پیوند می تواند از ابهام ، عدم قطعیت ، اضطراب و استرس آکنده باشد و یا سرشار از امید و خوشی بینی، نستوهی و همراهی باشد تاب آوری بعنوان یک رویکرد توسعه گرا میتواند فضای روانی بهینه را برای درمان حمایت کرده و تدارک ببیند اتحاد وتبیعت از درمان، توفیق در فرآیند دشوارپیوند و مدیریت بهینه وضعیت روانی و هیجانی با برخورداری از تاب اوری میسر خواهد بود که البته متغیرهای روان شناختی منفی و نامطلوب در روند درمان و در فضای پیوند به یقین با این سازه روانشناختی رابطه منفی دارد.

بیماران پیوند اغلب با توانایی های تحلیل رفته، دارایی های از دست رفته و جلوه های معنوی مخدوش در صف پیوند قرار گرفته اند.

توسعه و تقویت توانایی ها با تاکید بر حل **مسایل شخصی** ، گسترش دارایی ها با تاکید بر دریافت **حمایت های بیرونی** اعم از کادر درمان ، خانواده و گروه همسان و ارتقاء طراوات و **سلامت معنوی** با تاکید بر هیجانات مثبت میتواند شالوده و اهم اقدامات را در زمینه توسعه تاب آوری بیمارپیوند بشمار آید که به مهر پروردگارکنگره کرمانشاه پیش در امدی بر این مهم باشد .

توانمند سازی و ارتقا روانی پرستاران پیوند

مهدی شیرزادی فر؛ کرمانشاه

(اعصاب و روان)

Many studies have documented high prevalence of burnout and compassion fatigue in oncology nurses. Burnout has detrimental effects on nurses, patients, and healthcare organizations. However, burnout interventions have been shown to improve the physical and mental health of nurses, patient satisfaction, and the organizational bottom line by reducing associated costs of burnout. Although treatment centers may prevent and correct burnout in oncology nurses by providing various interventions, few articles focus on those interventions. This lecture compiles and describes interventions that will serve as a reference to nurses and healthcare organization leaders interested in implementing similar programs.

روز سوم جمعه ۱۲ اسفندماه

پانل اطفال

ارائه نتایج پیوند الوژن در آنمی آپلاستیک ارثی

حسن محمودی ؛ بابل

(خون و سرطان کودکان)

HSCT for inherited Bone Marrow failure Syndromes

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Introduction: Inherited bone marrow failure syndromes are a group of rare genetic disorders with single or multi-lineage cytopenia resulting from impaired hematopoiesis. Patients with inherited bone marrow failure syndromes have a high risk of developing clonal and malignant myeloid transformation. Constitutional bone marrow failure is associated with four types of diseases, Fanconi anemia (FA), dyskeratosis congenita, amegacariocytic congenital and reticular dysgenesia. Fanconi anemia is the most common type of inherited bone marrow failure syndromes. It is an inherited blood disorder due to abnormal breakages in DNA genes. Dyskeratosis Congenita often affects multiple parts of the body. Individuals with this disorder usually show changes in skin pigmentations, unusual fingernail growth, and mucosa leukoplakia. Bone marrow transplantation is the choice of treatment in inherited bone marrow failure syndromes

Background: Inherited bone marrow failure syndromes are a group of rare genetic disorders. Inherited bone marrow failure is associated with four types of diseases. Fanconi anemia (FA), is the most type of inherited bone marrow failure. Choice of treatment in inherited bone marrow failure is BMT.

Materials and Methods: In our center 12 patients with IBMF diagnosed. Only 4 patients(2 Fanconi anemia with positive Diepoxy Butane Test (DEB Test), 1 Fanconi anemia with negative DEB Test and 1 Dyskeratosis congenita), had HLA matched donor. Bone marrow transplantation was done for all of them. They are alive now. Eight patients who didn't have HLA matched donor treated with androgen and steroids.

Results: Unfortunately 3 patients whose was not HLA matched donor died where as patients with HLA matched donor has no problem now.

Conclusions: Inherited bone marrow failure syndromes should be treated with hematopoietic stem cell transplantation.

Keywords: HSCT, Bone Marrow, Bone Marrow failure Syndromes

HSCT for Children with ALL

غلامرضا باهوش ؛ تهران

(خون و سرطان کودکان)

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Although the majority of children and adolescents with acute lymphoblastic leukemia (ALL) are curable with current chemotherapy regimens, poor outcome persists in some individuals. Allo-HSCT is the most established treatment to control leukemia by means of the GVL effect. During the last decade, it was demonstrated in prospective trials that HSCT from HLA-MSD and from HLA-MURD results in similar outcomes. Standardized MAC for pediatric patients with high relapse risk produced a low incidence of TRM and effective control of leukemia. Currently, also HSCT from HLA haploidentical family donors or mismatched CB gives promising results. Nowadays, only patients with high-risk cytogenetic features or insufficient response to chemotherapy are eligible for HSCT in first remission. In contrast to earlier recommendations, for these patients a MSD and a MURD and for the highest relapse category also mismatched donors are an option. In contrast, all patients with relapse of T-ALL and patients who relapse during or within 6 months of cessation of chemotherapy (very early and early relapse) have a dismal prognosis when treated with conventional chemotherapy. Allo-HSCT from any donor type is the contemporary standard approach. Today it is not clearly proven whether HSCT from HLA-mismatched CB, TCD (alpha-beta depleted, CD34+ selected or CD3/ CD19 depleted) haplo-identical grafts or PT-CY approaches will result in the best outcome. If patients achieve a third or higher remission, allo-HSCT should be considered if the physical state allows such a procedure. Patient not in morphological remission should not receive allografts except in extraordinary experimental situations. Children with Ph + should receive post-transplant TKIs: Whether the prophylactic approach (all Ph + patients will receive TKIs) or a preemptive therapy (only patients with a Ph + signal peri-HSCT) is more effective has to be prospectively proven. To offer the patients the best available treatment options, a close collaboration between international therapy study groups and transplant consortia are necessary.

Key words: HSCT, ALL, HLA

Cord blood banking

مرتضی ضرابی

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Cord blood is the blood remaining the umbilical cord after your baby is born. Previously regarded as medical waste, cord blood has been found to contain large quantities of life-saving stem cells. After a baby is born and the umbilical cord is cut, some blood remains in the blood vessels of the placenta and the portion of the umbilical cord that remains attached to it. After birth, the baby no longer needs this extra blood. This blood is called placental blood or umbilical cord blood: "cord blood" for short.

Umbilical cord blood is an alternative hematopoietic stem cell source for patients with hematologic diseases who can be cured by allogeneic or autologous hematopoietic cell transplantation.

Family cord blood banking means parents pay a private bank to store their baby's cord blood so that they will have access to the stem cells in case of need. Many family cord blood banks store additional types of newborn stem cells, such as cord tissue and Public cord blood banking is the act of donating your baby's cord blood to be used by a family in need.

The first successful cord blood stem cell transplant was performed in 1988 in Paris, France. The patient was a boy with Fanconi anemia, a genetic and potentially life-threatening type of anemia.

Over 40,000 cord blood transplants have been performed around the world to treat a number of diseases including blood cancers like leukemia and lymphoma. Many of these transplant patients received unrelated cord blood that was generously donated to a public cord blood bank. Approximately 10% of alternative donor grafts for adult hematopoietic cell transplants are umbilical cord blood and 20% of all stem cell transplantation. To sum up, 2,000 Cord blood Hematopoietic Stem Cell Transplants are performed annually.

چشمی مقاوم به پردنیزولون

ستار حیدری ؛ کرمانشاه

(شبکیه چشم)

Ocular Graft versus Host Disease: A Review of Clinical Manifestations, Diagnostic Approaches and Treatment

Allogenic haematological stem cell transplantation (allo-SCT) from a human leukocyte antigen (HLA) matched related or unrelated donor is used as a curative therapy for a large number of ma- lignant and non-malignant haematological diseases. The curative effect of allo-SCT is achieved by graft versus leukaemia effect while the downside of the graft versus patient activity is the graft- versus-host-disease (GVHD), a major reason for mortality and morbidity. The search of articles for this review had been accomplished using Ovid, Medline, Embase, Pubmed and was supplemented by retrieving cross references also. Electronic literature search for English language articles with full text access was performed using graft versus host disease, ocular, management, dry eyes as key words. This review has been intended to explicate the classification, pathogenesis, risk factors and management of ocular graft versus host disease.

Keywords

Stem Cell Transplantation, Ocular, Graft Host Disease

GVHDنورولوزیک و درمان

نازنین رزازیان ؛ کرمانشاه

(مغز و اعصاب)

نازنین رزازیان، دانشیار نورولوژی، دانشگاه علوم پزشکی کرمانشاه

یکی از موانع در پیوند سلولهای بنیادی هماتوپوئتیک سندرم Graft- versus- Host است. اختلالی که به واسطه سیستم ایمنی باعث بروز عوارضی در بافتها و ارگانهای مختلف با شدت متفاوت می شود. عوارض نورولوژیک در سندرمهای حاد و مزمن Graft- versus- Host نادر است ولی می تواند مشکلات کلینیکی قابل توجه همراه با موربیدیتی و مورتالیتی بالا ایجاد کند. در این مقاله به بررسی عوارض نورولوژیک گوناگونی که به واسطه سیستم ایمنی ایجاد می شوند و شامل نوروپاتی ، میاستنی گراویس و میوزیت در سیستم اعصاب محیطی و عوارض سیستم اعصاب مرکزی شامل حوادث عروقی مغز، دمیلینیزاسیون وآنسفالیت به واسطه سیستم ایمنی می باشند، پرداخته می شود. در تشخیص این سندرم لازم است عوارض جانبی و توکسیسیتی داروها و همچنین وجود عفونتهای فرصت طلب حتما رد شوند. عوارض متعاقب پیوند سلولهای بنیادی و همپوشانی علایم ووجود بیماریهای همراه از یک سو و عدم شاخت مکانیسم بیولوژیک زمینه ساز سندرمGraft- versus- Host نیاز به انجام تحقیقات و بررسی های بیشتر را می طلبد.

Long Term Management of Allogenic Hematopoietic Stem Cell Transplantation Rcipients Endocrine Complications

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Allogenic hematopoietic stem cell transplantation (allo-HSCT) has become treatment of choice for a variety of hematologic and non-hematologic disorders. Survival and quality of life after HSCT are two important outcome which could be impaired by complications and time. Endocrine disorders are among the most prevalent late complication following HSCT. Chemotherapy, radiation therapy, transplantation and GvHD all cause hormonal dysfunctions. In addition, immunosuppressive treatment play an important role in the development of endocrine disorders after HSCT. Endocrine complications may be classified as 1) hormonal endocrine deficiencies (particularly gonado- and somatotropic related to delayed consequences of chemo- and above all radiotherapy, with their consequences on growth, puberty, bone and fertility); 2) auto-immune diseases, particularly thyroid dysfunction; 3) secondary tumors involving either endocrine glands (thyroid carcinoma) or dependent on hormonal status (breast cancer, meningioma), favored by immune dysregulation and radiotherapy; 4) metabolic complications, especially steroid-induced diabetes and dyslipidemia with their increased cardio-vascular risk. These conditions must be screened for and should be treated when they will be detected. Therefore, it is essential to maintain long-term endocrinologic surveillance and follow up for patients with HSCT. Furthermore, patients and their families should be informed about these adverse effects. Treatment of endocrine complications need a multidisciplinary approach.

روز سوم جمعه ۱۲ اسفندماه

پانل مراقبتهای پیوند

MUCOSITIS after stem cell transplantatation

ولی الله مهرزاد ؛ اصفهان

(خون و سرطان بزرگسالان)

Hematopoietic stem cell transplantation (HSCT) is widely used as a potentially curative treatment for patients with various hematological malignancies, bone marrow failure syndromes, and congenital immune deficiencies.

The prevalence of oral complications in both autologous and allogeneic HSCT recipients remains high, despite advances in transplant medicine and in supportive care.

Frequently encountered oral complications include mucositis, infections, oral dryness, taste changes, and graft versus host disease in allogeneic HSCT. Oral complications are associated with substantial morbidity and in some cases with increased mortality and may significantly affect quality of life, even many years after HSCT.

Inflammatory processes are key in the pathobiology of most oral complications in HSCT recipients. This lecture will discuss frequently encountered oral complications associated with HSCT focusing on the inflammatory pathways and inflammatory mediators involved in their pathogenesis.

The Photopheresis for treatment of graft versus- host disease

علی ملکی؛ کرمانشاه

(هماتولوژی)

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Hematopoietic stem-cell transplantation (HSCT) is being used to treat some genetic and immunologic diseases and a variety of hematopoietic malignancies. However, graft-versus-host disease (GVHD) continues to be a major complication following allogeneic HSCT (allo-HSCT) with high morbidity and mortality.

Corticosteroids are the first-line treatment for GVHD, but around 40% of patients become steroid-resistant or fail to respond at a safe dose. These patients need to a second-line treatment where no single therapeutic modality has been proven to be the most effective.

Extracorporeal photopheresis (ECP) is an efficient and established therapy for cutaneous T-cell lymphoma, rejection after solid organ transplantation and various autoimmune diseases. In many institutions, ECP is commonly regarded as the preferred second-line treatment for GVHD.

ECP is an immunomodulatory treatment that involves collecting leukocytes (mononuclear cells) from peripheral blood, exposure to a photosensitizing agent, 8-methoxypsoralen, are then treated with ultraviolet (UV) radiation, after which they are re-infused. The mechanism of action of ECP has been explored, and several theories have been advanced.

Here, we review the use of ECP for the treatment of GVHD, primarily for steroid-refractory status. We also explain technical aspects, mechanism of action, safety profile, clinical efficacy data and considerations on the optimal use of ECP in the treatment of refractory GVHD.

Keywords: GVHD, Extracorporeal photopheresis; HSCT

Autologous hematopoietic stem cell transplantation for autoimmune diseases

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Autoimmune diseases a heterogeneous group of disorders with genetic, environmental and individual etiological factors. Immunosuppression and immunomodulation are basic therapeutic strategies in all of them and are generally employed with success. Nonetheless, patients who do not respond, who require more toxic drugs to achieve or maintain remissions or who relapse despite continuing therapy present a therapeutic challenge.(1)

Hematopoietic stem cell transplantation (HSCT) has emerged as a promising treatment for severe and therapy-refractory autoimmune diseases. The pathogenesis of autoimmune diseases is currently attributed to T and B cells inappropriately recognizing self-antigens and initiating a cell-mediated or humoral reaction,or both, resulting in inflammatory tissue and vascular damage.Therationalefor using HSCT in autoimmune diseases is to eradicate one's autoreactive immune cells and to regenerate a naıve, self-tolerant immune system.(2)

Over the last 20 years, HSCT has been used to treat patients with severe autoimmune and inflammatory diseases whose response to standard treatment options has been limited, resulting in a poor long-term prognosis in terms of survival or disability. The vast majority of patients have received autologous HSCT where an increasing evidence-base supports its use in a wide range of autoimmune diseases, particularly relapsing remitting MS, systemic sclerosis and Crohn's disease. Compared with standard treatments for autoimmune diseases, HSCT is associated with greater short-term risks, including a risk of treatment-related mortality and long-term complications.(3)

Diseases such as rheumatoid arthritis, systemic lupus erythematosus and systemic sclerosis, are common autoimmune diseases.I hope HSCT is a successful solution for patients(4)

روز سوم جمعه ۱۲ اسفندماه

سمینار پرستاری

رژیم های conditioning

مهرداد پاینده

(فوق تخصص هماتولوژی و عضو هیات علمی

مدیکال انکولوژی KUMS

Best selection of conditionings regimen for allogenic and autologous transplantation

Mehrdad payandeh 1

KUMS

• The conditioning regimen pretransplan- tation should take into consideration patient and disease characteristics including age, comorbidities, disease status, and most probably measurable residual disease.
• Conditioning regimens may include irradiation, chemotherapy, serotherapy, monoclonal antibodies, and targeted therapy which varied in different malig- nancies and types of donors.
• The dose intensity of the pre-HSCT conditioning varied between MAC, RTC, RIC, and NMA in decreasing intensity order.
• The NMA and RIC significantly reduced transplant-related organ toxicity and mortality enabling transplant in elderly and medically infirm patients.
• The conditioning regimens for allo- HSCT from cord blood and haploidenti- cal donors are somewhat specific.

اصول تغذیه در بیماران پیوند مغز استخوان

آلاله مدیری

(کارشناس ارشد تغذیه

مسئول مشاوره تغذیه مجتمع بیمارستانی امام رضا (ع))

بررسی وضعیت تغذیه ای بیماران سرطانی، کاندید پیوند سلولهای بنیادی

آلاله مدیری[1]، دکتر علیرضا خاتونی[2]، مریم همتی[1]، فاطمه جنت المکان[1]، مریم جنت المکان[1*]

۱.واحدتوسعه تحقیقات بالینی مجتمع بیمارستانی امام رضا(ع)، دانشگاه علوم پزشکی کرمانشاه

۲. مرکز تحقیقات بیماری های عفونی مجتمع بیمارستانی امام رضا(ع) ، دانشگاه علوم پزشکی کرمانشاه

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سابقه و هدف: سوءتغذیه در بیماران مبتلا به سرطان پدیده شایعی است که غالبا در مسیر درمان و پیگیری بیماری از نظر دور مـی مانـد. افزایش‌شیوع انواع سرطان دردهه های اخیر و از طرفـی پیشـرفت دانش پزشکی در زمینه پیوند سلولهای بنیادی، توجه بیشتری را معطوف خود می نماید. لذا این مطالعه با هدف بررسی وضعیت تغذیه ای در بیماران سـرطانی کاندیـد پیونـد سـلولهای بنیادی در مجتمع بیمارستانی امام رضا(ع) انجام شد.

روش کار: مطالعه حاضر توصیفی مقطعی است که بر روی ۱۳۰ بیمار مبتلا به سرطان بسـتری در بخـش انکولـوژی انجـام شـد. جهت ارزیابی تغذیه ای بیماران از پرسشنامه اسـتاندارد Mini Nutritional Assessment(MNA) اسـتفاده شـد. اطلاعـات دموگرافیک ، قد، وزن، BMI، محیط عضله وسط بازو و دور عضله ساق پا و وضعیت تحرک مورد اندازه گیری قرار گرفت. پـس از جمع آوری اطلاعات با استفاده از نرم افزار spss نسخه ۱۶، داده ها مورد تجزیه تحلیل آماری قرار گرفت.

نتایج: درمطالعه حاضر بیشتر بیماران را افراد مذکر۷۸ نفر مرد(۶۰٪) با میانگین سن۱۵/۸± ۵۱/۱ سال تشکیل دادند. بیشتر بیماران ۴۱٪(۵۳ نفر) در وضعیت خطر سوء تغذیه،۳۲/۳ ٪(۴۲نفر) در وضعیت سوء تغذیه و ۲۶/۹ ٪(۳۵ نفر) در وضعیت نرمال تغذیه، قرار داشتند.

نتیجه‌گیری: با عنایت به شیوع نسبتا بالای سوء تغذیه در بیماران سرطانی کاندید پیوند سلول های بنیادی، انجام اقدامات مداخله ای نظیر ارزیابی دوره ای بیماران از نظر اختلالات تغذیه ای، توصیه می شود.

واژگان کلیدی: سرطان، سوءتغذیه، سلولهای بنیادی، پیوند

حمایت های روحی روانی از خانواده بیماران تحت پیوند مغز استخوان

معصومه رشیدی الاشتی

(کارشناس ارشد روان پرستاری

دنشگاه علوم پزشکی ساری)

Psychological Support of Patients with BMT and their Family

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Nowadays, cancer is one of the most important global health problems. According to the GloboCAN 2018 estimates, the shares of cancer incidence and deaths in Asia are 48.4% and 57.3%, respectively. It is predicted that the prevalence of cancers in developed countries will increase by 45% by the year 2025.

Bone marrow transplantation (BMT) has evolved over the last decade from a controversial research procedure to a standard therapeutic modality, becoming an important innovative treatment for hematological malignancies, solid tumors, immunodeficiency diseases and metabolic disorders. It is characterized by a difficult and protracted trajectory involving persons who have previously received a diagnosis of life-threatening illness also it is marked by the risk of significant complications, with survival of the recipient being the predominant concern. The family, who is most frequently a spouse, is a key partner throughout this difficult experience, and a threat to the life of the recipient is a threat to the social, psychological and emotional well-being of the family. BMT procedure is divided into several stages, each accompanied by particular emotional and psychological issues. In providing care for transplant recipients, donors, and families must be familiar with the psychological stages of the procedure, the psychological themes such as body image, and the patient's mechanisms of coping with the stress of such protocols. BMT's complex regimens of high-dose chemotherapy and total-body irradiation, germ-free environments, graft-versus-host disease and total parenteral nutrition can precipitate significant psychological squeal in some patients with acute and long-term consequences. In response to their illness, transplant patients may also develop emotional disturbances of anxiety and depression. Psychological support is an integral part of BMT care. It help patients and their families acquired new skills to cope with current stressors and use to increase coping self-efficacy (i.e. confidence in the ability to cope with BMT) that can give them more authority face to future with less problems. In fact coping self-efficacy has been demonstrated to be associated with improving BMT- related outcomes such as reduced psychological signs distress.

Some psychological approaches are; training relaxation, guided imaginary, meditation, stress management strategies (ie; adaptive coping, interpersonal conflict resolution skills, problem solving and healthy life style targeted attention to healthy nutrition and sleep health), talking therapy(express feeling by talking), expressive writing interventions (write down fears and emotions), spiritual support through prayer. The financial burdens of the family also need attention.

اصول مراقبتهای پرستاری تخصصی در پیوند مغز استخوان

سکینه قربانی

(کارشناس پرستاری

سرپرستار بخش پیوند مغز استخوان مجتمع بیمارستانی امام رضا)

Principles of specialized nursing care in stem cell transplantation

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Bone marrow transplantation is a procedure to replace damaged or destroyed bone marrow with healthy bone marrow stem cells.

There are 3 kinds of bone marrow transplants include autologus, allogenic and seyngenic. The nurse's contribution to successful transplantations in general is undeniable.

In this article describes the roles of nurse in dealing with a patient under bone marrow transplantation.

In the course of 5 years, the activities of nurses working in the BMT unit were controlled and described.

The nurses working in BMT unit perform all of kinds of care include **life maintenance care** (forwarding of patient for bathing and supply of mouthwash for oral hygiene) **general technical care**(hand washing and disinfection before and after entering the unit¸ preparing and administrating medication ¸verification of oxygen saturation level and abdominal circumference ¸ puncture and maintenance of peripheral venous access¸ administration of intravenous oral and inhalation medication ¸collaboration in catheterization¸ patient preparation for tests ¸**Specialized technical**(dressing and fixation change ¸vessel maintenance and heparinzation¸ infection prevention activities ¸blood transfusion care¸ care for parental nutrition infusion¸ care for chemotherapy infusion ¸hematopoietic stem cell separation and infusion ¸Interview ¸physical examination ¸nursing diagnoses ¸nursing notes and nursing evolution.

Nursing care of patient with bone marrow transplantation, acute and chronic GVHD requires symptom recognition and knowledge of treatment modalities ¸ management and care of both physical and psychosocial elements and consistent coordination of care for possibly a prolonged period of time.

Key word: BMT transplant – Nursing care

پوستر

Performance of bone marrow transplantation center in Imam Reza hospital ,Kermanshah ,Iran

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One of the best and modern achievements of medical science is transplantation an organ that in a relatively short time in the world medical history has accepted as a new and inimitable way for currying many diseases. The hematopoietic stem cell transplantation (HSCT) is needed cell intravenous infusion for reestablishing bone marrow function in diseases that bone marrow destroyed or weakened. this approach is doing as a redeemer way after chemotherapy with high dosage for malign diseases. bone marrow transplantation is the main and final therapy for many of hematologic and malign diseases such as aplastic anemia kinds of thalassemia and leukemia and hereditary metabolic disorders.

During last 4 years in BMT ward at Imam Reza hospital of Kermanshah 130 successful case of bone marrow transplantation done. 66.37 % of patient done autoloug transplantation and 3863% done alogen transplantation. From this cases 29.84% of patient are women and 70.16% are men 33.87% are uneducated and others are respectively 28.84% under diploma 18.55% diploma ,7.26% of patient were alliterated,8.87 % were under the diploma and the rest of patient had college degrees. The average age of patient was 41-50 year old. MNC taken from patients in 26.42% of patients 3-5,in 50% of patients 6-8,19.81% of patients 9-11 and in the 3.77% of patients was more than11 .the blood group in the 37.1% of patients was A

In the 19.35% was B, in the 9.68% of patients was AB and 33.87% of patients was O . 91.13% of the patients was RH+ and the other was RH-. Chimerism hematopoietic in the 100% of patients was 90%. From all of transplanted patient 45.16 % affected by multiple myeloma, 16.13% Hodgkin's lymphoma 8.06% nonhodgkins lymphoma ,20.97% AML, 4.84% ALL and 2.42 % myelofibrosis ,Aplastic anemia 2.42%, Fanconi anemia 1%. 90 % of patients before transplantation have not recurred. In 97.25% of patient's, cell separation done just once. In 2.75 % of patient cell separation done twice. Obtained MNC average of patients was 6-8 %. 69.81% of patient's engraftment is done between 6 to 10 days. The average received platelet of patients was 21 to 30 bags. After transplantation 90.63 % of patients did not have complication. After dismission 9.37% of patients hospitalize again due to several causes. In pursuance of patients 95.83 % continue their life without any problem .pearson correlation between CD3-CD34 is 76% and between CD3-MNC is 238 % and maximum correlation between CD34-MNC was 330%.

Key word : BMT transplant,cancer , patients

An uncommon case of thrombotic thrombocytopenic purpura (3 days after engraftment) in autologous peripheral blood stem cell (PBSC) transplantation in a young girl with hodgkin disease

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A 23 year-old girl was diagnosed with Hodgkin's disease stage IV B in November 2014 .
She was treated with ABVD in alternate courses to a total of six, and achieved first remission in April 2014 .
She had one relapsed after 6 months of first remission and another relapse after 8 months (ICE regimen for salvage) before admission for autologous BMT in December 2020 in our center.
An autologous peripheral blood progenitor cell transplantation was scheduled 2 months later. She was conditioned with bendamustine (150 mg/m2 on day −2), cytarabine (600 mg/BID on days −2 and −1) and etoposide (600 mg/BID on day −2 and -1) , melphalane (300 mg on days -1) .
In January 2020 , three days after engraftment time in (+ 11)after stem cell transfusion, she developed fever, malaise and seizure. Physical examination showed mild jaundice and petechiae on the lower limbs. Thrombocytopenia (21 × 109/l) and hemolytic anemia (hemoglobin 7 g/dl, lactate dehydrogenase 1456 U/l, total bilirubin 2.5 mg/dl, reticulocytes 35%) with schistocytes in the blood smear were present. Direct and indirect Coombs tests were negative. Coagulation tests were normal. Liver enzymes is in normal ranges and renal parameters were: urea 56 mg/dl and creatinine 0.78 mg/dl. Patient suffered of constant fever that despite of full coverage of antibiotics and anti fungal drug , do not decrease and she sensed delusions and seizure. Further diagnostic studies including tests for antinuclear antibodies and viral serology were negative. No antiplatelet antibodies were detected. Bone marrow biopsy showed good cellularity without signs of tumor infiltration, myelo- dysplasia or leukemia. The patient then developed two part of generalized seizures . A cranial CT scan was normal. Chest CT scan be normal. A diagnosis of thrombotic thrombocytopenic pur- pura was made based on the findings of severe anemia, thrombocytopenia, red cell fragmentation, high levels of lactate dehydrogenase and neurological symptoms. Plasma transfusion were started along with steroid therapy (1 mg/kg/day) for 3 days, and plasmapheresis was perfor- med on day +1 . Plasma exchanges were performed for 5 days with a COBE Spectra (Lakewood, CO, USA) and plasma was replaced with fresh frozen plasma, with resolution of hemolysis. At each session, a plasma volume of 50 cm3/kg was administered over a period of 4– 5 h. Plasma exchange achieved good results; platelet counts ranged from 21 × 109/l to 75 × 109/l and LDH levels ranged from 1456 to 453 Ul during days 1–5 of plasmapheresis.
Discussion: For the pathogenesis of this disease there are three proposed pathological mechanisms. Firstly, a systemic disturbance of endothelial cells causes a defect in the processing of von Willebrand factor multimers, which are capable of binding to the platelet receptors GP Ib and GP IIb/IIIa and inducing systemic platelet aggregation.7 Sec- ondly, decreased synthesis of prostaglandin I2 (PGI2) by the endothelium leads to widespread microthrombi in various organs (brain, kidney, liver and heart).8 Thirdly, low levels of protein C in plasma have been postulated.9 However, plasma exchange does appear to be effective in the manage- ment of TTP following BMT,10 as we observed in our patient. Plasma infusion can be initiated at a dose of 30 cc/kg/ 1 day before plasmapheresis. In bone marrow recipients, several risk factors for TTP have been proposed such as: previous treatment with high-dose chemotherapy and TBI, opportunistic infections, GVHD and CsA therapy. None of the foregoing were found in our patient except for high-dose chemotherapy. In secondary TTP after BMT, vascular damage may be caused by cellular rather than soluble factors and this is less likely to be ameliorated by plasma exchange.2 Although the only risk factor found in our patient was high-dose chemotherapy, we believe that this is a case of post-autologous BMT-TTP because of the patient's clinical characteristics and because she did respond to plasmapheresis .4 Attention to fever in BMT patient is an important sign because can be due to other than infectious etiology in this case . In this case due to immunosuppression , we continue fever of unknown approaches for she. We continue antibiotics during our approach.

AIDS treatment policy at bone marrow transplant

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AIDS or acquired lmmunodeficiency system ,is a type of disease that developed by HIV virus that involved the immune system .HIV infection has three main stages :Acute HIV infection , chronic HIV infection and AIDS.In the first stage the person may experience an illness similar to influenza and acute infections for a short period of time .Then the disease enter into along period without any signs and symptoms , which is called latency stage or chronic HIV infection. The third stage begins when the count of the CD4 measures less than 200/mm^2 (Joint Programs United Nations on AIDS).Bone marrow transplant has created new hopes in the treatment of AIDS and numerous malignancy with AIDS have been treated by this method. In an unprecedented action the American doctors at Boston hospital preformed bone marrow transplant on two patients with both Hodgkin lymphoma and AIDS .German researchers also reported that they were able to treat an AIDS patient with Leukemia. In KUMS -BMT center we treated a 35 years old woman an known case of Hodgkin lymphoma that been candidate for ASCT (second relapse) .For this case CD4 ,CD34 and CD8 assessed. Also virus level checked at first and during treatment.A 41 year-old female patient, diagnosed with Hodgkin Lymphoma, was admitted to kermanshah-based Imam Reza Hospital.In the primary tests, her HIV test result was positive.On June 13th, 2018 on infectious consultation was asked for , and the result of HIV AB Elise's method was positive once again .In addition , the result of her HIV western blot was positive too.Moreover , the reported HIV viral load measured 218000 copy/ml. Furthermore , CD4 and CD8 were checked three times and the results were as follows:

1-For the first time :CD4=393 and CD8=1463

2-Eight days later:CD4=394 and CD8=1898

3-Four days later :CD4=trivial and CD8 =trivial

In the first time , the ratio of CD4 to CD8 was % 26,where as in the second and third time, the ratio was trivial ,The test results were communicated to the infectious physician, and then he prescribed Vanovir tablet (drug choice for AIDS) and she candidate for ASCT procedure.At the beginning of hospitalization , the patient's Urin culture Esherchiacoli with colony count was lower than 10000 , and on the fifth and eighth days after addition Candida and Esherchiacoli grew as much as 50000, which was treated by Ceftriaxon,Amikacin and Nitroforantion .

In the next urine cultures, the test results were negative.The patient underwent mobilization with GCSF and three days later ،cell separation was done and the MNC collected value was $6/97\times10^{8}$ reported.Then she was treated by conditioning regime of Hodgkin lymphoma, (BEAM) protocol.BMT was done.On the twenty- fourth day, after the transplant, engraft mentioned occurred. Until engraftment time , she was treated with complex of drugs consist of for treatment of sepsis that was done during ASCT process (caspofungin , Meropenem , vancomycin , Leocoverin, Vitamin B12 , Alb , Calcium Gluconat, GCSF) and prophylactic oral drugs It is note worthy that she did not know about her condition (due to psychological consult) and in order to maintain the patient morale and prevent the development of anxiety , depression and disorder in the treatment process no extra explanation was given to the patient . She became aware of her illness discharge and was referred to the AIDS Control Center for continuous treatment. She engraftment at the 21 days of ASCT.After three months of this therapy she is alive and follow up continue.In conclusion with close follow up with support of new drug for AIDS we can introduce BMT for malignant patients disease that are candidate for this policy .

Key words : AIDS-HIV-Canser

Early hepatic complications during the first year after bone marrow transplantation in patients with leukemia

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Background and Aim: Bone marrow transplantation (BMT) is a treatment in patients with leukemia. Liver dysfunction is a common problem in BMT recipients that can have a direct effect on the final results. Therefore, it is important to determine the etiology and its incidence for appropriate treatment. The aim of this study was to determine the prevalence of liver dysfunction and its causes after BMT in patients with leukemia.
Methods: One hundred and twenty leukemia patients were transplanted at the bone marrow transplant center of Imam Reza Hospital in Kermanshah. 67.5% were male and 32.5% were female. Mean age of patients was 47.7± 13. 13.38 years. All patients underwent sonography before and after transplantation. Hepatic enzymes, Blood indexes and seroepidemiology of HIV, HBs, and CMV were measured. Patients were given prophylaxis with Ursodiol (300 mg/kg) and N-acetylcysteine (150 mg/kg).
Results: Abnormal total bilirubin, hepatic GVHD, and high ferritin were reported in 7.5%, 15%, and 71% of patients, respectively. IgG-Anti CMV, HBsAg and HIV were reported 56%, 1.6% and 0.8%, respectively. Ast, Alt, and Alph were reported abnormal in 5%, 20%, and 15% of subjects, respectively. Liver sonography was negative for VOD (Veno-Occlusive disease). The incidence of mortality was 6%.
Conclusion: Although liver disorders were observed following GVHD and the presence of viruses, but no case of VOD was shown. Prophylaxis with Ursodiol and N-acetylcysteine seems to be successful in these patients.
Keywords: Veno-Occlusive Disease (VOD), bone marrow transplant, liver disorders

Evaluation of side effects and efficacy of Lomustine (CCNU)and Bandamustine in patients with lymphoma

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Introduction: Autologous Stem Cell Transplantation (ASCT) is the main stay of care in relapsed lymphomas including diffuse large B-cell lymphoma (DLBCL). There are different conditioning regimens which differ in efficacy and toxicity. Therefore a less toxic regimen might improve the results in relapsed lymphoma patients.

Purpose: The aim of this study was to evaluate the side effects and efficacy of two drugs Lomustine (CCNU) and Bandamustine after bone marrow transplantation in patients with lymphoma referred to Kermanshah Imam Reza Hospital.

Method: The current study was a clinical trial study. Thirty patients with lymphoma (Hodgkin's and non-Hodgkin's) were divided into two groups after bone marrow transplantation; The first group consisted of 13 patients treated with lomustine and the second group consisted of 17 patients treated with bandamustine. The common side effects of the two drugs during the hospital stay were studied.

Results: Seventy percent of Hodgkin's lymphoma patients and 30% of non-Hodgkin's lymphoma. The mean age of patients was 37.86 ± 12.59 years old and the mean time of engraft was 10 days. Drug side effects including diarrhea, oral mucositis, nausea and vomiting were observed in both groups. No significant association was found between side effects and the type of drug administered ($p>0.05$). There was no significant relationship between the time of engraft with the prescribed drugs ($p = 0.07$).

Conclusion: Although no significant association was found between the side effects of the two drugs; But lomustine showed more side effects than bandamustine. However, Lomustine reduced the time of engraft, which was close to significant. Overall, drugs seem to have no advantage over each other and the therapist should decide on the choice between the two drugs. Further studies with large sample size and long-term follow-up are recommended.

Keyword: Lomustine (CCNU), Bendamustine, Side Effects, Lymphoma

بررسی ارتباط بررسی ارتباط ایمنوگلوبولین‌های آنتی CMV (سایتومگالوویروس) با زمان اینگرافت در بیماران پیوند مغز استخوان در شهر کرمانشاه

رویا چگنه لرستانی

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مقدمه: عفونت سیتومگالوویروس (CMV) یکی از مهمترین عوامل موثر در بروز و مرگ و میر ناشی از پیوند مغز استخوان است. رخداد عفونت CMV در یک دوره زمانی (کمتر از ۱۰۰ روز) بعد از پیوند دیده می‌شود و می تواند چندین عضو از جمله ریه، روده، دستگاه گوارش، چشم، سیستم عصبی مرکزی و... را درگیر کند. آزمایشات معمول برای تشخیص عفونت CMV در این بیماران شامل آزمایش ضد CMV و آزمایش CMV DNA پلیمراز (PCR) می‌باشد. هدف از این مطالعه سنجش ارتباط بین حضور CMV با زمان اینگرافت بود.

روش کار: بیماران مبتلا به انواع کانسر مراجعه کننده به بیمارستان امام رضا که نیاز به پیوند مغز استخوان داشتند مورد بررسی قرار گرفتند. آزمایشات IgM-Anti CMV وIgG-Anti CMV برای بیماران و دهندگان پیوند انجام شد، همچنین CMV-PCR برای تمامی بیماران انجام گرفت. تجزیه و تحلیل آماری به کمک نرم افزار SPSS (version 21) انجام شد و مقادیر P-value کمتر از 0.005 به عنوان سطح معنی دار در نظر گرفته شد.

نتایج: ۶۲ بیمار تحت پیوند سلول‌های بنیادی مغز استخوان قرار گرفتند، ۴۸ بیمار (۷۷/۴٪) پیوند اتولوگ و ۱۴ بیمار (۲۲/۶٪) پیوند آلوژن داشتند. متوسط زمان اینگرافت ۱/۸۹±۹/۴ روز بود و ۲ بیمار (۳/۲۲٪) نیز فوت کردند. یک بیمار (۱/۶۱٪) IgM-Anti CMV مثبت و ۳۵ بیمار(۵۶/۴٪)IgG-Anti CMV مثبت بودند. شیوع IgM-Anti CMV و IgG-Anti CMV در دهندگان پیوند (آلوژن) به ترتیب صفر درصد و ۷۱/۴٪ بود. شیوع CMV-PCR ۴/۸٪ گزارش شد. ارتباط معناداری بین مثبت بودن حضور CMV با زمان اینگرافت مشاهده نشد (P>0.005). ارتباط بین IgM-Anti CMV وIgG-Anti CMV بیماران و دهندگان معنادار بود(p<0.001).

نتیجه گیری: هر چند نتایج این پژوهش نشان داد طولانی شدن زمان اینگرافت با عفونت CMV ارتباط معناداری ندارد، اما تشخیص زودهنگام آن به منظور جلوگیری از پیشرفت بیماری حائز اهمیت است زیرا اغلب عفونت‌های CMV در ابتدا بدون علامت می‌باشند و در صورت بی‌توجهی، اکثر موارد عفونت فعال شده این ویروس (به دلیل تضعیف سیستم ایمنی این بیماران) قابل کنترل نیستند.

کلید واژه: پیوند مغز استخوان، سایتومگالوویروس، زمان اینگرافت

چگونگی مراقبت ازکاتترهای ورید مرکزی

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استفاده از کاتترهای عروقی (Vascular Access Devices (VADs در امر مراقبت و سلامت نوزادان، کودکان و بالغین، نقشی حایز اهمیت دارد. استفاده از کاتترهای عروقی در شرایط حاد و مزمن بیماران و برنامه ها ی درما نی طولانی مد ت کاربرد دارند. گروه بیماران انکولوژی از جمله موارد کاندید استفاده از کاتترهای عروق مرکزی در مراحل مختلف بیماری مانند اعمال جراحی، استفاده از داروهای شیمی درمانی، هم چنین سیر مزمن و مراحل پیشرفته بیماری جهت درمانهای نگهدارنده میباشند. در بیماران مبتلا به سرطان، استفاده از داروهای شیمی درما نی موجب آسیب دیواره عروق محیطی و در نتیجه مشکلات دسترسی و استفاده از عروق محیطی میشوند. کاتترهای ورید مرکزی اولین بار توسط دودریک در سال ۱۹۶۸شرح داده شد. در سال ۱۹۷۳او لین کا تتروريد مرکزی طولانی مدت به منظور تغذیه وریدی مورد استفاده قرار گرفت. در سال ۱۹۷۹کاتتر وریدی هیکمن برای اولین بار جهت شیمی درمانی استفاده شد و استفاده از کاتترهای پورت زیر جلدی از اوایل سال ۱۹۸۰مطرح شد. در بعضی از اعمال جراحی، پزشک نیاز دارد تا لوله ای پلاستیکی را به عنوان جسم خارجی از راه عروق به اندام مورد نظر برساند. این لوله را کاتترمی گویند که در طیف وسیعی از اعمال جراحی استفاده می شود.کاتترلوله ای پلاستیکی است که بصورت عروقی استفاده می شود. بدین معنا که درون عروق بزرگ قرار گرفته و در جای خود ثابت می شود. این لوله بیشتر در محل عروق فمورال، ژگولار یا ساب کلاوین تعبیه می شود. بدلیل انعطاف زیاد این لوله، با کمی تغییر در شکل آن، می توان از آن برای بسیاری از اعمال نظیر عمل های قلب و عروق، اورولوژی، سیستم عصبی و گوارشی استفاده کرد. برای قرار دادن کاتتر در گردن از سیاه رگ ژوگولار داخلی internal jugular vein، برای قرار دادن کاتتر در سینه از سیا هرگ آگزیلاری و یا سیاه رگ ساب کلاوین و برای قرار دادن کاتتر در کشاله ران از سیاهرگ فمورال استفاده می‌شود. با وجود اینکه کاتتر ها توسط بی حسی موضعی تعبیه می شوند و فواید زیادی نیز دارند، اما خطرات بسیاری هم دارند. از جمله خطرات کوتاه مدت آن می توان به تشکیل لخته و ایجاد عفونت اشاره کرد که می تواند خطرناک باشد. برای جلوگیری از این کار معمولا پرستاران انتهای هر جلسه دیالیز کاتتر را هپارین لاک می کنند ودر بخشهایی غیر از دیالیز مرتب درسرم ۲۴ ساعته برای جلوگیری از کینگ شدن از هپارین استفاده میشود. همچنین برای جلوگیری از ایجاد عفونت، انجام پانسمان استریل بسیار ضروری است.سوراخ شدن شریان، سوراخ شدن آئورت و آمبولی هوا از دیگر خطرات و عوارض کوتاه مدت استفاده از کاتتر هستند که با رعایت دستور العمل های استفاده صحیح از ابزار و رعایت نکات استفاده از کاتتر می توان آن ها را به حداقل رساند. اندیکاسیون کاتترها شامل تزریق مایعات- تزریق دارو (انواع داروهای شیمی درمانی، تجویز بلند مدت داروهایی چون انواع آنتی‌بیوتیک‌ها و ...) نمونه‌گیری مکرر خون - برقراری حمایت تغذیه ای- تزریق خون و فرآورده‌های آن تزریق موادحاجب مورد استفاده در رادیولوژی - دسترسی برای مسیرهای خونی خارج بدن (همودیالیز و تعویض پلاسماو آفرزیس) مانیتورینگ یا مداخلات - اندازه گیری فشار ورید مرکزی- اندازه گیری اشباع اکسیژن - جریان خون ورید مرکزی- فشار شریان ریوی- استقرار ضربان سازهای موقت- مدیریت هدفمند دما می باشد .زیرا اندازه گیری سی وی پی یک شاخص مهم فشار پرشدن بطن راست قلب می باشد . فشار پر شدن بطن راست ، حجم ضربه ای قلب یعنی میزان خون پمپ شده با هر ضربان قلب را تعیین می کند . همچنین یک شاخص صحیحی از توانایی قلب برای پمپ کردن خون جهت حفظ نرمال فشار خون و پرفیوژن بافتی می باشد . در نهایت CVPشاخص صحیحی از حجم پایان دیاستولی بطن راست است .CVP بر اساس سانتیمتر آب اندازه گیری می شود . در این مقیاس میزان نرمال CVP در بزرگسالان ۱۰cm H2O – ۵و در کودکان 9 – 3 cm H2O است. مانیتورینگ CVP دقیق تر از اندازه گیری فشار خون می باشد زیرا تغییرات حجم در گردش خون به محض کاهش درCVPمنعکس میشود. کاتتر وریدی مرکزی توسط فردی واجد شرایط ، بداخل یکی از ورید های مرکزی وارد می شود و سپس به خارج دهلیز راست جایی که ورید اجوف فوقانی به ورید اجوف تحتانی می رسد ، وارد می شود. اندیکاسیون ها : مانیتورینگ CVPدر بیماران بد حال-TPN -تجویز دارو-دسترسی نداشتن به ورید های محیطی . محل های شایع استفاده شده جهت تعبیه CVP Line:ورید ژوگولار داخلی-وریدهای ساب کلاوین -ورید های فمورال میباشد. اقدامات لازم پس از تعبیه CVP Line: بعد از گذاشتن CV-lineمعمولاً گرافی chestانجام می شود .انجام CXRبمنظور تایید محل صحیح گذاشتن CV-lineصورت میگیرد.انجام گرافی قفسه سینه به تشخیص زود هنگام پنوموتوراکس کمک می کند. خارج کردن کاتتر cvp:این کار فقط به دستورپزشک معالج انجام می شود . یک تکنیک آسپتیک بوده و باید بعد از ارائه توضیحات کامل درباره فرآیند کار به بیمار انجام شود ابتدا تمام پانسمانها و بخیه ها را باز کنید. سپس از بیمار بخواهید که یک دم عمیق با بازدم کامل را انجام دهد.در این هنگام کاتتر را در حالی که بیمار نفس خود را نگاه داشته است ، سریعاً خارج می کنیم و بالاخره فشار محکمی به محل سوراخ CV-lineوارد کرده و از بیمارمی خواهیم که تنفس طبیعی خود را دوباره شروع کند این فشار را حداقل تا ۵دقیقه به محل وارد می کنیم . این کار باعث بند آمدن خونریزی می شود تنها به میزان متوسطی از فشار برای خروج کاتتر نیاز می باشد. اما گاهی اوقات کاتتر به سختی خارج میشود یک پزشک با تجربه کاتتر CVPرا چرخانده و به آرامی بیرون می کشد اگر مداخلات فوق موثر واقع نشود محل ورود CV-lineرا با پانسمان استریل پوشانده و به تیم جراحی ارجاع دهید.عوارض جاگذاری غلط کاتتر-تشکیل هماتوم- سوراخ شدن شریان-پنوموتوراکس-خونریزی-آمبولی –سپسیس-آمبولی کاتتر که خیلی نادر است-ترومبوز-هموتوراکس-تامپوناد قلبی-اریتمی قلبی

کلید واژها : کاتتر – عروق مرکزی

ملاحظات پرستاری در بیماران پیوند سلولهای بنیادی با GVHD

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بیماران با پیوند مغز استخوان مبتلا به GVHD نیاز به یک مجموعه اضافی از مهارت ها و دانش دارند که شامل اشنایی پرستاران با با عوارض جانبی ، مها رت های ارزیابی، مدیریت درمان و مراقبت های حاد و شدید می باشد . مراقبت پرستاری بیماران مبتلا به GVHD نیازمند شناخت علائم و آگاهی از نحوه درمان ،مدیریت و مراقبت از عوامل جسمی و روانی-اجتماعی و هماهنگی سازمانی مراقبت ، که احتمالانیاز به مدت زمان طولانی است . یکی از نقش های پرستاران این است که از بیمار حمایت کنند مثلا BMT احتمالا آماده سازی برای مدت زمان انتهای زندگی اش باشد ،اگر بیمار به درمان GVHD مقاوم باشد.

GVHD- BMT transplants

Comparison of Continuous Mononuclear Cell Collection (cMNC) and Mononuclear Cell Cell (MNC) methods for cell proliferation (Apheresis) in patients with bone marrow transplantation

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Introduction: Apheresis refers to the secretion of peripheral blood and then the return of blood to the donor's body when the amount of patient cells or cell donors reaches the desired level. There are two new and old methods for the aphrodisiac, which include Continuous Mononuclear Cell Collection (cMNC) and Mononuclear Cell Cell (MNC), respectively. In this study, the efficacy of these two methods for collecting monocytes, lymphocytes and CD34+ cells was investigated with a Cellseprator device.

Method: Separation was done in two patients by cMNC method and two other patients by MNC method. Each group was made up of a man and a woman. Their mean age was 49.2 ± 13.3 year olds and the mean weight was 61.5 kg .The primary and final MNC was measured with CD34+.

Results: The results showed that the level of MNC separation compared to the cMNC method was higher than monocyte and lymphocyte and CD34+ cells (2 times more). This was while the four patients had almost the same data.

Conclusion: The cMNC and MNC methods are reliable, efficient, and comparable in performance and cellular composition of the final product, respectively. This study suggests that the use of MNC method in patients may improve the results of the apheresis, which is based on clinical experience.

Key words: Apheresis, Bone marrow transplantation, Continuous Mononuclear Cell Collection (cMNC) and Mononuclear Cell Collection (MNC).

Investigation of microbial contamination of bone marrow transplantation in Imam Reza hospital in Kermanshah city

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Introduction: Hospital infections are one of the major causes of mortality in hospitalized patients, especially in sensitive areas, including the bone marrow transplantation .This section is important because of the special conditions that patients have in these rooms. The environment, equipment, and hands and nose of the staff are among the major causes of these infections .The contamination in the equipment can play an important role in the development of hospital infections, and even delay the ingraft process. The aim of this study was to determine the rate of microbial contamination in Imam Reza hospital in Kermanshah, Iran in 2018.

Materials and Methods: In this descriptive cross-sectional study, 45 items including 15 sample of nose personnel and 30 sample of environmental (air, floor, handles, beds, valves, sink, panel and medical equipment) were sampled. Air sampling was done by a plate and from other samples by swap. After sampling, the specimens were immediately transferred to the laboratory and then, using standard microbiology methods, they were compared to the detection of contaminated microorganisms.

Results: Results showed, of 45 cultivated, 40 items (88.8%) and 5 items (11.1%) were positive and negative cultivation, respectively. The dominant microorganism was staphylococcus negative coagulase (37.7%). The rest of bacteria were included staphylococcus aureus (31.1%), positive gram bacilli (11.1%) and citrobacter s.p (11.1%). Eighty percent of the personnel were carrier of staphylococcus aureus. Only 4.4% of environment was infected by this bacteria.

Conclusion: The result of this study showed that the major culture were normal flora and except staphylococcus aureus, no other pathogen was found. Since there is possibility of horizontal transmission of staphylococcus aureus from the nose by the hands of the medical staff, it is recommended that nurses wash their hands frequently and in compliance with the required standards.

Key words: Bone marrow transplantation, microbial contamination, Kermanshah

The Cancer Patients' Nutritional Status: The Case of Candidates of Stem Cell Transplantation

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Background and Objective: Malnutrition is considered as a phenomenon occurring in cancer patients, which is often neglected during treatment and follow-up of the disease. Increase in the variety of cancers in recent decades and also knowledge development of stem cell transplantation is absorbing lots of attentions. The aim of this study was to evaluate the nutritional status of cancer patients undergoing stem cell transplantation in Imam Reza Hospital.

Method: This study was a cross-sectional descriptive study which was conducted on 130 patients admitted to oncology ward. The Mini Nutritional Assessment Questionnaire (MNA) was administered to evaluate their nutritional status. Demographic information, height, weight, BMI, middle arm circumference, calf muscle circumference, and mobility status were measured. After collecting the information, the data were analyzed using SPSS v16.

Results: In this study, most patients were male (60%) including 78 men with an average age of 51.1±15.8 years. Most patients (41%, n=53) were at the risk of malnutrition, 32.3 percent of the patients (n=42) were malnourished, and 26.9 percent (n=35) were in normal nutritional status.

Conclusion: Due to the almost high prevalence of malnutrition in cancer patients undergoing stem cell transplantation, taking interventional measures, such as periodically evaluating patients in terms of nutritional disorders, is recommended.

Keywords: Cancer, Malnutrition, Stem Cells, Transplantation

The role of nursing care in bone marrow transplantation

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Introduction: Patients treated with bone marrow transplantation During the preparation process for the transplant And then it has complications like muscle pain, Nausea, fatigue and mood disorders. Controlling these complications have a crucial role in the success or failure of the transplant.

method : Searching through databases magiran, SID, Medline , pubmed , google scholar with key words such as nursing care,bone marrow translation And its Persian equivalents were done and 12 studies were reviewed.

Findings : Bone marrow transplantation has been started as a treatment for many malignant diseases since 1960. Reini et al (2004) write However, this is potentially a therapeutic approach However, the patient may have multiple physical and psychological complications during this process . Long-term and painful treatments for this disease It exacerbates the severity of existing psychological problems As studies by Pearl et al (2004) show Between 24 and 84% of cancer patients concurrently They suffer from a psychiatric disorder Therefore, the need for nursing care especially in different areas of pain relief, proper nutrition and anxiety reduction seems to be essential . Melikazadeh et al. (2019) write Due to weakened immune system due to previous chemotherapy Observe nutrition and hygiene tips to prevent the spread and spread of infections is important. Nurses' awareness of nutritional care resources and their health and nutritional needs It is very effective in the recovery process of patients. According to the results of Ghiasvandian et al. (2018), pre-transplantation anxiety in these moderate to severe patients has been reported. Nurses' awareness of this issue and its inclusion in plans It provides comprehensive care for these patients On the other hand, crossing the bone marrow transplant route is never easy. But palliative care helps make this path easier And palliative care can be performed even before the transplant route begins . Some helpful palliative care includes nursing for bone marrow transplant patients . It relieves pain, helps sleep, cures shortness of breath, and helps calm the patient But the palliative care team can treat the symptoms of bone marrow transplant Cure the underlying disease while relieving your symptoms.

Therefore, palliative care is of great benefit to these patients The nurse can help the patient adjust to the situation Provide sufficient information to the patient and his or her family.

Conclusions: Nursing Care in Pain Reduction, Anxiety and Nutrition Quality of Bone Marrow Transplant Patients It has a great impact on improving the treatment of these patients Therefore, it is recommended to increase the awareness of nurses in these areas Therefore, palliative care is of great benefit to these patients The nurse can help the patient adjust to the situation Provide sufficient information to the patient and his or her family.

Keywords: Nursing Care, Bone Marrow Transplant Patient

Determinants of serious bloodstream infections in Iranian pediatric cancer patients

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Background And Objective: Bloodstream infections (BSI) remain a major cause of morbidity and death in patients undergoing treatment for cancer. However, all recent epidemiological and therapeutic studies underline the absolute need for knowledge of the factors governing the infections in each center. The aim of this study is to identify the factors affecting BSI in the Shahid Beheshti Medical University. More tailored policies for the treatment of patients with febrile neutropenia following chemotherapy can then be created.

Subjects And Methods:Over a 12-month period, all children with cancer and fever, with or without neutropenia, who were admitted to the Shohada Tjrish Hospital for empirical therapy of febrile episodes and who had a microbiologically confirmed bloodstream infection were studied retrospectively.

Results:A total of 164 BSI occurred in 587 febrile episodes in pediatric cancer patients at the Shohada Tjrish Hospital in one year. Gram-positive bacteria were isolated in 84 episodes (51.2%) and 61.9% of the total isolates (either single or mixed), Gram-negative in 48 (29.6%), and mixed infections in 22 (13.7%). The common causative agents of bloodstream infections in this study were coagulase-negative staphylococci (16.2%), *Staphylococcus aureus* (13.4%), *Streptococcus* spp. (12.1%) followed by *Acinetobacter* spp. (6.7%) and *Pseudomonas* spp. (5.5%). Fungemia was encountered in 18 episodes, being mixed in nine of them. A more serious BSI in terms of a prolonged episode was encountered in 30.2% of the episodes and was significantly associated with patients being hospitalized, having intensified chemotherapy, polymicrobial and fungal infection, lower respiratory tract infections and persistent neutropenia at day seven.

Conclusions:In a large population of children, common clinical and laboratory risk factors were identified that can help predict more serious BSI. These results encourage the possibility of a more selective management strategy for these children.

Keywords: Bloodstream infections, Fungemia, immunocompromized oncology patients

Evaluation of release rate of cisplatin drug loaded on poly butyl cyanoacrylate nanoparticles in simulated in vitro brain mass simulation

Niloufar Abdirad

One of the important new applications of poly butyl cyanoacrylate nanoparticles due to its specific properties is its use as a carrier for targeted delivery of cancer drugs. In this study, the release and efficacy of cisplatin-loaded poly butyl cyanoacrylate nanoparticles loaded with an anticancer drug in a simulated in vitro environment (C6) in three 24-hour time cycles were investigated. Dependence test confirmed higher release of nano drug in acidic medium with lower pH in early hours. The effect of cisplatin and cisplatin nanoparticles on brain cancer cells was also evaluated and the results clearly indicated that the nanoparticles loaded with cisplatin had more effect than the cisplatin alone on cancer cells. It has a brain mass and causes more to be lost.

Keywords: Cisplatin, Nano-cisplatin, simulation of cellular environment, drug release rate, drug efficacy

The study of Polylactic acid – hydroxyapatite (PLA/HA) nanocomposite in simulated body environment for orthopedic fixation applications: A 24-week study

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Abstract:

Polylactic acid (PLA) and calcium phosphate ceramic composite are widely accepted in orthopedic fixation and are mainly replacing metal soft tissue fixation devices, such as interference screws and suture anchors. However, the critical disadvantages of poor biological properties and poor mechanical strength compared to metal devices have left much to be desired in bio-absorbable orthopedic implant materials. In order to develop a more ideal composite material based on polylactic acid, hydroxyapatite (HA) nanoparticles were used as the reinforcing material. Consequently, it is important to understand its behavior in a physiological environment as well as maintaining its mechanical strength. Injection molded mechanical testing specimens were fully immersed in a phosphate buffered saline (PBS) solution as a simulated body fluid, and mechanical strength was evaluated at 0, 8, 16, and 24 weeks. Simulated body fluid (PBS) pH measurements were recorded of the fluid in the vicinity of degrading composites. The results indicated that with the addition of 5 wt% HA nanoparticles, the flexural strength was maintained and 81.5% of the tensile strength was retained in vitro through 16 weeks. Furthermore, the pH of the fluid in the vicinity of PLA/HA composite was maintained throughout the 24 weeks in all samples excluding the 50 wt%. The results from the present study, therefore, suggest the use of HA nanoparticles may have a strong impact on future orthopedic fixation devices.

Keywords: Hydroxyapatite, Polylactic acid, in vitro degradation, Mechanical Evaluation

چالش ها و راهکارهای پیوند مغز استخوان (یک مطالعه مروری)

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مقدمه: بیماران تحت درمان با پیوند مغز استخوان با چالش های اخلاقی و اجتماعی و مشکلات فراوانی اعم از عوارض ریوی، گوارشی، خونی، عصبی، عفونت، مشکلات تغذیه ای مواجه هستند که روند درمان، بهبود و بقای این بیماران را تحت تاثیر قرار می‌دهد و برای هر کدام از چالش های موجود راهکار های مناسبی وجود دارد.

این مقاله مروری به بررسی مقالات مرتبط با چالش ها و راهکار های بیماران پیوند مغز استخوان میپردازد.

مواد و روش ها: این مطالعه با استفاده از مطالعات کتابخانه ای، جستجو در مقالات ژورنال ها و پایگاه های اطلاعاتی و منابع الکترونیک با کلید واژه های Challenges، Consideration، Hematopoietic Stem cell Transplantation Patients در پایگاه های داده ای شامل Science Direct, Google Scholar, Pubmed, Clinical Cancer Researchبا زبان انگلیسی و بدون محدودیت زمانی انجام گردید، در مجموع ۶۲ مقاله یافت شد و پس از بررسی عنوان و خواندن چکیده آنان، مقالات کاملا مرتبط به دست آمد و نتایج حاصل از ۹ مقاله مرتبط پس از خواندن متن گزارش شد.

یافته ها: با بررسی مقالات مرتبط با عنوان، بیماران تحت پیوند مغز استخوان، با چالش های اخلاقی، اجتماعی و عوارض ریوی، گوارشی، خونی، عصبی، عفونی و تغذیه ای مواجه هستند که هر یک از این عوارض مذکور در صورت عدم کنترل، روند درمان، کیفیت زندگی و مرگ و میر را در این بیماران افزایش می دهد. در صورت استفاده از راهکار های تخصصی موجود برای هریک از این چالش ها می توان تا حد چشمگیری اثرات آنها را کاهش داد.

نتیجه گیری: نتایج نشان داد که بیماران تحت پیوند مغز استخوان با چالش های فراوانی مواجه هستند که با پیگیری و راهکارهای مناسب از سوی تیم درمان و سیاست گذاران امور بهداشتی و ارزشیابی آنها و به تبع آن افزایش کیفیت زندگی و بهبود روند درمان این بیماران قابل تعدیل و کنترل هستند.

واژگان کلیدی: راهکار، چالش، بیماران پیوند مغز استخوان

بررسی ارتباط حمایت اجتماعی خانواده بر تاب آوری در بیماران پیوند مغز استخوان

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مقدمه :پژوهش های بین المللی حاکی از آن است که هر ساله پنجاه هزار پیوند مغز استخوان در دنیا انجام می شود.پیوند مغز استخوان شیوه ای است که برای درمان بیماران دارای اختلالات خون و مغز استخوان به کار می رود .این دسته از بیماران برای مقابله بهتر با این بیماری مزمن، نیازمند دریافت خدمات ویژه در زمینه سلامت روان هستند.

عوامل متعددی در سلامت روان بیماران موثر هستند.یکی از آنها حمایت اجتماعی می باشد که طبق نظر پژوهشگران به دو شکل کلامی و غیرکلامی می تواند واقعی یا به صورت یک تصور ادراک شده برای فرد باشد.زمانی که حمایت های اجتماعی از سوی خانواده برای فرد اعمال شود تاثیر بیشتری از سایرگروه های جامعه دارد.

تاب آوری نیز بصورت یکی از توانایی های افراد در برابر شرایط ناگوار بروز می کند.این توانایی به بیماران کمک می کند برای برقراری تعادل زیستی-روانی در شرایط دشوار، توانمندتر باشند.به عبارتی دیگر تاب آوری نوعی ترمیم خود با پیامدهای مثبت هیجانی، عاطفی و شناختی است .و به کار بردن آن در شرایط تهدیدآمیز برای بیماران پیوند مغز استخوان، موجب سازگاری بیشتر در زندگی است.بنابراین، پرداختن به عوامل موثر و دخیل در روند بهبود بیماران پیوند امری حائز اهمیت است.

از این رو، این مطالعه با هدف بررسی اجمالی مطالب علمی موجود در زمینه ارتباط حمایت اجتماعی خانواده بر تاب آوری در بیماران پیوند مغز استخوان تدوین گردید.

روش تحقیق :مقالاتی که بین سالهای 1023 تا 1010 به زبان انگلیسی و فارسی در پایگاه اطلاعات داده pubmed, Irandoc, sid, scholar, medlib ,Iranmedex, چاپ شده اند، بررسی شدند .جهت جستجو از کلیدواژه هایی مانند social support : Resilience, , Bone marrow transplant patients و حمایت اجتماعی و پیوند استخوان، حمایت روانی و پیوند مغز استخوان، تاب آوری در پیوند مغز استخوان و ترکیب این واژه ها استفاده شد.مقالات حاصل از جستجو توسط فیش برداری، دسته بندی و مرتبط ترین آنها منتخب شدند.

یافته ها :طی جستجو تعداد 24 مقاله متناسب برگزیده شد .با بررسی این مقالات می توان دریافت که بیماران تحت پیوند سلول های خونی علاوه بر مشکلات جسمی، با مشکلات و خطرات متعدد روحی، روانی، اجتماعی مواجه هستند.

آن دسته از بیماران که پیش از عمل پیوند، افسردگی و اضطراب زمینه ای داشتند، پس از پیوند نیز شرایط دشوارتری را تجربه کردند و تاب آوری کمتری نشان دادند .همچنین، بیشتر در معرض ابتلا به اختلالات روانی بودند .بعلاوه وجود تعارضات مختلف در بافت خانوادگی این بیماران، رابطه معکوس با بهبود وضعیت آنها را نشان داد که بر خودپنداره و خودکارآمدی بیماران پیوند نیز اثر منفی داشت. همچنین، بیمارانی که مورد توجه خانواده خود بودند، روحیه مبارزه جویی قوی تری داشتند و پس از پیوند نیز با تاب آوری بالاتر و اضطراب کمتر، موفقیت بیشتری در پیوند مغز استخوان نشان دادند. خانواده ها و مراقبان آموزش دیده، علائم اولیه افسردگی در بیمار پیوند مغز استخوان را تشخیص می دادند و حمایت اجتماعی خود را بصورت کلامی و غیرکلامی، جهت پیشگیری از تشدید این علائم به کار می گرفتند. این بیماران که مراقبان آموزش دیده از لحاظ حمایت های اجتماعی داشتند، با شرایط بیماری سازگارتر بودند، آشفتگی های روانی کمتری نشان دادند و پس از انجام پیوند نیز زودتر روحیه خود را بازسازی کردند.

حمایت های اجتماعی از سوی خانواده بیماران پیوند، بخصوص شیوه هایی که در روش حل مسئله و سبک های سازگاری ارائه می شوند، مثل یک عامل محافظتی عمل می کند و می تواند تاثیر به سزایی در روند بهبود درمان این بیماران داشته باشد.

نتیجه گیری :با توجه به اهمیت بالای تاثیر حمایت اجتماعی خانواده در بهبود وضعیت بیماران پیوند مغز استخوان، توصیه می گردد برنامه ای حمایتی جهت آموزش مراقبان و اعضای خانواده این بیماران تدارک دیده شود .و پیش از شروع درمان بیماری از روش های حمایتی خانواده جهت ارتقاء تاب آوری بیماران استفاده گردد .بدین طریق می توان از عوارض متعدد روانی و حتی جسمی این عمل کاست.و با تقویت روحیه مبارزه جویی به روند درمان این بیماران کمک کرد.

کلمات کلیدی :پیوند مغز استخوان، تاب آوری، حمایت اجتماعی

The effect of stem cells on blood glucose level in diabetes mellitus

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Diabetes is known as a metabolic diseases that increases glucose levels, diabetes occurs when the body cells do not produce enough insulin or are not produced to respond to insulin. By 2030, the number of people with diabetes is estimated to be 366 million. Also type 2 diabetes is expected to rise to 629 million by 2045. The frequent need to measure blood glucose levels, insulin injection and diet restriction as well as imposing high social costs are factors that determine the need for non- invasive diabetes treatment. Stem cell transplantation is now considered an effective treatment for diabetes. Embryonic stem cells have the capacity to self-regulate and are used as a major candidate for tissue engineering and regenerative therapy.

Embryonic stem cells are proliferative and free of any contaminants that are completely reproducible.

During embryonic development, new endocrine cells originate from their progenitor cells in the pancreatic duct. Many researchers believe that some types of Langerhans islet cells are mixed with pancreatic duct cells that produce endocrine cells during embryonic development. To treat type I diabetes due to the damage to the immune system against pancreatic cells, researchers must be able to overcome this autoimmune defect so that the transplanted and replaced cells are not destroyed again.

Researchers believe that initially using immunosuppressive therapies can be helpful. On the other hand, it may be possible to make more cells by genetic manipulation that can escape the invasion of the immune system or become less detectable by the immune system. Studies of the use of insulin-producing stem cells have moderated the complications of diabetes. The researchers suggest that the islets of Langerhans are one of the types of cells that differentiate spontaneously in embryonic bodies.

In this study examined the effect of stem cells on blood glucose level in diabetes mellitus.

Keywords: Stem cell, Diabetes mellitus, glucose

بیومارکرهای کاربردی برای پیامدهای پس از پیوند سلولهای بنیادی خونساز(HSCT)

دکتر علی ملکی

دکتر علی ملکی[1]، دکتر مهرداد پاینده[2]

۱. متخصص هماتولوژی آزمایشگاهی و علوم انتقال خون، عضو هیأت علمی دانشگاه علوم پزشکی کرمانشاه

۲. فوق تخصص هماتولوژی و انکولوژی، عضو هیأت علمی دانشگاه علوم پزشکی کرمانشاه

امروزه پیوند سلول‌های بنیادی خونساز (HSCT) به طور فزاینده‌ای برای درمان انواع بیماری‌های بدخیم و غیربدخیم کاربرد دارد. پیوند سلول‌های بنیادی خونساز آلوژنیک (Allo-HSCT) مؤثرترین ایمونوتراپی توموری است که تا به امروز وجود دارد. اگرچه این شیوه درمان می‌تواند اثرات مفیدی در پیوند علیه لوسمی (GVL) القا کند، ولی عوارض منفی همچون بیماری پیوند علیه میزبان (GVHD) را نیز در پی دارد که ارتباط تنگاتنگی با پیوندعلیه لوسمی داشته، و یک عامل اصلی ناتوانی و مرگ و میر به دنبال HSCT به شمار می‌رود.

اگرچه عوامل بسیاری از جمله سن گیرنده، شدت ناتوانی، شدت درمان آماده‌سازی، منبع اهدا، سازگاری HLA- گیرنده دهنده، رژیم آماده‌سازی، پیشگیری از GVHD پس از پیوند تعیین کننده نتیجه پیوند هستند، ولی راهنمای جامعی برای پیش‌بینی نتایج پیوند نمی‌باشند. با پیشرفت‌هایی که در ارتباط با انتخاب دهنده و رژیم‌های آماده‌سازی به دست آمده، نتایج پیوند بهبود یافته است. با این حال، عوارض اولیه پس از پیوند همچنان مانعی برای موفقیت پیوند و بقای کلی هستند. مواردی همچون بیماری حاد پیوند علیه میزبان (aGVHD)، سندرم انسداد سینوسی (SOS) و سندرم پنومونی ایدیوپاتیک (IPS) به طور چشمگیری می‌توانند عوارض و مرگ و میر Allo-HSCT را افزایش دهند.

بیومارکرها می‌توانند روشی مؤثر برای شناسایی زودهنگام عوارض مربوط به HSCT به شمار رفته و راهنمایی‌های بالقوه برای درمان ارائه دهند. یک بیومارکر ایده‌آل می‌تواند از نمونه‌ای که به راحتی در دسترس بوده و غیرتهاجمی باشد و به آسانی در فواصل زمانی مختلف قابل جمع‌آوری باشد، بدست آید. بیومارکرها به ۴ گروه تشخیصی، پیش‌آگهی، پیش‌بینی کننده و پاسخ به درمان دسته‌بندی شده‌اند.

پیشرفت‌های اخیر فناوری همراه با کاهش هزینه‌های آنها منجر به افزایش روزافزون بکارگیری اومیکس (Omics) در زمینه‌های تحقیقاتی و بالینی شده است. اومیکس که شامل ژنومیکس، ترنس‌کریتومیکس، پروتئومیکس و سیتومیکس می‌باشد، یک حوزه متحول با فناوری‌هایی برای تشخیص RNA و پروتئین‌ها است. این بیومارکرهای جدید همچنین درک عمیق‌تری از مکانیسم‌های درگیر در پاتوفیزیولوژی پس از آلو-HSCT را ممکن ساخته‌اند. با توجه به کمبود گزینه‌های درمانی، گذشته از گلوکوکورتیکوئیدها، که در ۳۰ سال گذشته برای این بیماران پیشنهاد شده است، توسعه کارآزمایی‌های بالینی مبتنی بر بیومارکر مورد نیاز است.

در این مقاله ما به ارائه جدیدترین بیومارکرهای ارائه شده برای موارد بیماری پیوند علیه میزبان (GVHD)، سندرم انسداد سینوسی (SOS) و سندرم پنومونی ایدیوپاتیک (IPS) خواهیم پرداخت. همچنین بیومارکرهای مرتبط با دیابت ملیتوس پس از پیوند (PTDM) و میکروآنژیوپاتی ترومبوتیک (TMA) را ارائه خواهیم نمود. این بیومارکرها می‌توانند مداخلات درمانی به موقع و انتخابی را تسهیل نمایند.

به طور خلاصه، پیشرفت‌های عمده در زمینه پس از پیوند، طبقه بندی خطر را برای جلوگیری از خطر یا درمان آن فراهم ساخته و به نظر می‌رسد بیومارکرها به طور فزاینده برای ارتقاء ایمنی تومور بدون ایمنی کشنده پس از allo-HSC کاربردی باشند.

آدرس مکاتبات:

کرمانشاه، خیابان دولت آباد، دانشکده پیراپزشکی، گروه علوم آزمایشگاهی

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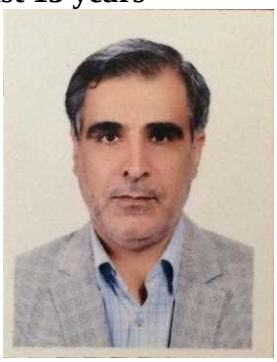
Tuberculosis treatment results in Western Iran over the past 13 years

Ebrahim Shakiba



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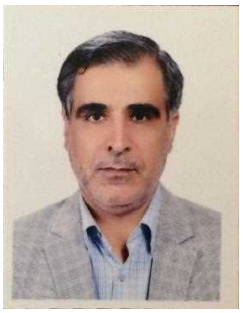
Background: Tuberculosis is one of Iran's most significant infectious diseases, which with the advent of new and chronic diseases, is still known as the most threatening disease of human community. The goal of this research was to assess the result of TB treatment in western Iran (province of Kermanshah) and its associated factors during 2005 to 2017.
Methods: In this cross-sectional study, all patients who had tuberculosis from 2005 to the end of 2017 were evaluated. Treatment outcomes were categorized into four domains of “treatment completion," “death," “treatment failure," and “recoveries" based on national guidelines, and factors affecting outcome were identified using univariate and multivariate logistic regression.
Results: Tuberculosis incidence was 15.21 in males and 14.32 in females per 100,000 individuals. The therapy result was almost uniform during the years investigated. 32.2% had extra pulmonary TB; 58.7% completed treatment; 9.9% died, and 4.1% had treatment failure.
After controlling for key factors, the odds of completion of therapy in females were 1.1 (1.0-1.3) times greater than in males, and therapy failure and mortality caused by tuberculosis were also smaller in females than in males 0.6(0.4-0.8) and 0.5(0.3-0.7) respectively). HIV was the greatest variable in the prevalence of tuberculosis with 9.5 (5.8–16.8) times greater chances of death in HIV-positive people than those without HIV.
Conclusion: Given the high prevalence of pulmonary tuberculosis and public health concerns, early screening and infection diagnosis, education and protective measures are suggested to prevent tuberculosis patients.
Keywords: Epidemiology, Tuberculosis, Tuberculosis treatment results, Iran.

The influence of non-compliance of anti-retroviral therapy on mortality and survival of HIV+/AIDS patients co-infected with hepatitis and /or TB over a 25 years period: observational cohort study

Ebrahim Shakiba



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Introduction: Non-compliance of individuals to HIV+/AIDS therapy and co-infections with tuberculosis, hepatitis B and C can lead to disease progression and increase mortality rate. In this study we aimed to investigate the effect of non-compliance of anti-retroviral therapy (ART) on mortality rate and the survival of HIV+/AIDS patients co-infected with hepatitis and /or TB over a 25 years period.

Methods: In the present study, data from the file of all HIV / AIDS –infected individuals from Kermanshah province between 1994 and 2019 were extracted and evaluated by experts. Logistic regression model and multivariate Cox models were used to measure the effect of co-infection with hepatitis B, C and TB and non-compliance to therapy on mortality and survival rates of individuals.

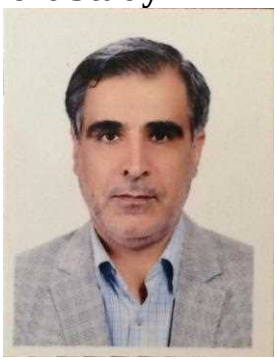
Findings: Out of 2867 individuals infected with HIV / AIDS (85.4%), 2449 were men. 1817 (63.4%) individuals had non-compliance of ART and 267 (9.3%) had stopped therapy incompletely; the mortality was higher in those who had discontinued therapy than those who had not been treated. After controlling the effective variables, the survival and mortality rates in individuals co-infected with HCV or HBV or both were not statistically significant than those without these co-infections. But tuberculosis and non-compliance to therapy were the most important factors affecting the mortality. The mortality chance in persons co-infected with TB was 8.4 times [OR=(95% CI),8.4(6.5-10.9)] and those with non-compliance to therapy was 7.7 times [OR = (95% CI), 7.7 (5.7-10.5)]. Also, the risk of death in individuals co-infected with TB was 1.2 times [HR = (95% CI), 1.2 (1.0-1.4)] than those who did not co-infected with TB and in individuals the non-compliance to therapy was 1.6 times [HR = (95% CI), 1.6 (1.3- 2.0)] than those with compliance therapy.

Conclusion: According to the results, non-compliance of ARV therapy and infection with TB can reduce the survival and increase the risk of death in HIV+ patients. Therefore, it is necessary to monitor more closely the ART and prophylaxis of TB-infected persons. Also, it is necessary that the daily monitoring of TB patients was performed by their relatives. It is also emphasized that ART should be initiated even if CD4 level is not low in order to reduce the disease progression and the resulting mortality.

Keywords: non-compliance, AIDS / HIV, survival, co-infection.

The association between duration of mobile use and blood parameters: Evidence from the Ravansar Cohort Study

Ebrahim Shakiba



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Introduction: Electromagnetic fields leads to the accumulation of energy and changes in cell function activities, but its intensity and extent are largely unknown, so the purpose of this study was to investigate the association between blood parameters changes and mobile use.

Methods: In this population-based study, the baseline data (at the recruitment phase) of Ravansar Non-communicable Disease (*RaNCD*) *cohort study* were used. Blood samples were taken from all subjects by using standard methods and after 8 hours of fasting. In order to measure the duration of mobile use per day, the average duration (of calls or answers) was asked from all subjects in the past 12 months. After excluding those who did not have mobile phones, individuals were divided into four equal quintiles to categorize the duration of mobile use. Dose-response relationship was used to investigate the relationship between the duration of mobile use and changes in blood parameters.

Results: 1889 (18.8%) out of 10054 subjects did not use mobile phones. The average duration of mobile use (minimu of 0 and maximum of 300 minutes) was 19.5 ± 23.2 minutes per day. The investigation of the relationship between blood parameters and the duration of mobile use showed that the level of WBC increased in women with increase in time spending on calling. Also, the RBC, Hb and HCT levels in women were significantly lower than those who speak less. The MCV level remained unchanged in both sexes. MCH and MCHC levels decreased in men and women with increasing the duration of mobile use. Also, the platelet counts only decreased significantly in women.

Discussion and Conclusion: Considering the impact of the duration of mobile use on blood parameters, especially in women, there is a need for programs to increase the level of awareness of the community as well as training to reduce the duration of mobile use in individuals.

Keywords: electromagnetic waves, mobile phone, blood cell, cohort

بررسی کاربرد سلول درمانی در درمان بیماری های قلبی وعصبی

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مقدمه وهدف: سلولهای بنیادی سلول های تمایز نیافته با قابلیت تقسیم و تمایز به انواع مختلف سلول ها می باشند .منبع این سلول ها از جنین و افراد بالغ تامین می شود که هر کدام ویژگی های خاص خود را دارند، امروزه با پیشرفت علوم پایه و مهندسی بافت، سلول درمانی روشی جدید و جایگزین برای بیشتر بیماری های مزمن، مادرزادی و اکتسابی محسوب می شود، این امر باعث شده تا کشورهای مختلف در سال های اخیر میلیون ها دلار در زمینه کاربرد سلول های بنیادی برای درمان بیماری های مختلف هزینه نمایند و بیماران را به استفاده از این روشها تشویق کنند، هدف از این مطالعه بررسی کاربرد سلول درمانی در درمان بیماری های قلبی وعصبی می باشد.

روش کار: این مقاله از نوع مروری است که محقق به جستجوی کلید واژه های " سلول درمانی، بیماری های عصبی، بیماری های قلبی " درپایگاه های اطلاعاتی Scopus, Pub Med, Science Direct, Sid, Magiran پرداخت، در این جستجو ۱۰ مقاله مرتبط با موضوع پژوهش ما بود.

یافته ها: از جمله بیماری های مزمنی که توسط سلول درمانی درمان شده اند، بیماری های قلبی وعروقی می باشد. برای پیوند سلولی در عضله قلب، از سلول های مغز استخوان، سلول های جنینی، سلول عضله قلب افراد دهنده فوت شده، سلول عضله صاف یا مخطط خود فرد، سلول های قلبی جنینی، خون بندناف استفاده می شود، یکی دیگر از بیماری هایی که توسط سلول درمانی قابل کنترل است بیماری پارکینسون می باشد، سلول های بنیادی میتوانند منبع نامحدودی از نورون های دوپامینرژیک را برای پیوند به بیمار فراهم آورند و باعث بهبود رفتارهای حرکتی و علایم بیماری گردند. بررسی و مقایسه انواع مختلف سلول های بنیادی در درمان بیماری پارکینسون تا حدودی به نقش مؤثرتر سلول های بنیادی عصبی و سلول های بنیادی بند ناف در درمان بیماری اشاره دارد. سلول های بنیادی برای درمان بیماری های مختلف حاد و مزمن سیستم عصبی نظیر سکتهٔ مغزی خونریزی دهنده و ایسکمیک، بیماری پارکینسون، بیماری هانتینگتون، اسکلروز جانبی آمیوتروفیک، مالتیپل اسکلروز و آلزایمر پیشنهاد شده اند.

بحث ونتیجه گیری: سلول درمانی در بیماری های مزمن هنوز در مراحل اولیه و آزمایشگاهی قرار دارد، بسیاری ازموضوعات اساسی وجود دارد که باید مورد بررسی قرار گیرد. در صورتی که بتوان از سلول های بنیادی جهت بیماری های مزمن استفاده نمود این امر سبب افزایش کیفیت زندگی بیماران و کاهش هزینه های درمان این بیماران می شود.

کلید واژه ها: سلول درمانی، بیماری های عصبی، بیماری های قلبی

اخلاق پزشکی در ارتباط با پیوند سلول های بنیادی جنینی

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مقدمه وهدف: در سال های اخیر با پیشرفت های وسیعی که در حوزه ی دانش و فناوری پزشکی روی داده است که منجر به تغییر و تحول عمیقی در اخلاق پزشکی گردیده است، یکی از مباحث مهم در علم نوین پزشکی توجه به سلول های بنیادی می باشد، تحقیقات در خصوص کارکرد سلول های بنیادی دارای سابقه ای طولانی است، رشد و گسترش اخلاق کاربردی در دهه های اخیر، نشانگر ارتباط مستقیم بین تکنولوژی و اخلاق است. هدف از این مطالعه مروری بر ملاحظات اخلاقی در پیوند سلول های بنیادی است.

روش کار: این مقاله از نوع مروری است که محقق به جستجوی کلید واژه های " اخلاق پزشکی ، پیوند، سلول های بنیادی" درپایگاه های اطلاعاتی Scopus, Pub Med, Science Direct, Sid, Magiran پرداخت، در این جستجو ۱۸ مقاله مرتبط با موضوع پژوهش ما بود.

یافته ها: در ارتباط با استفاده از سلول های بنیادی جنینی مهم ترین توجه به شأن و ارزش رویان و جنین است و اجماع ،مسئله بین المللی قابل توجهی در مخالفت با همانندسازی زایشی وجود دارد، اما در بحث همانندسازی درمانی، برای استفاده از سلول های بنیادی جنینی نظرهای مختلفی مطرح است. در یک سر طیف، برخی رویان را یک انسان کامل می دانند و در سوی دیگرعده ای این طیف رویان را فاقد شأن و حقوق انسانی می دانند. کسانی که رویان را دارای شأن و جایگاه یک انسان و دارای حقوق اولیه ی انسانی می دانند تخریب آن را مساوی قتل نفس می شمرند؛ اما برخی معتقدند رویان آن قدر ناقص و اولیه است که هیچ گونه جایگاه اخلاقی برای آن نمی توان متصور بود. برخی معتقدند موجود حاصل شده از شیوه ی انتقال هسته رویان محسوب نمی شود، چرا که از لقاح ایجاد نشده است ، یا معتقدند این عمل، کاشت تخمک و حاملگی نیست، از سوی دگر پژوهش در رویان می تواند برای درمان نازایی و بیماری های جدی نتیجه ی مفیدی در پی داشته باشد.

بحث ونتیجه گیری: از آنجایی که در بحث سلول های بنیادی مهم ترین موضوع بحث درباره ی سلول های بنیادی جنینی است، بدیهی است که قانونمند کردن تحقیق های سلول بنیادی جنینی ضامن پیشگیری و رفع پیامدهای ناگوار احتمالی و ممانعت از استفاده ی ابزاری از رویان و حافظ شأن و جایگاه رویان است.

کلید واژه ها: اخلاق پزشکی، پیوند، سلول های بنیادی

Human Embryonic Stem Cells in Regenerative Medicine

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Human embryonic stem cells (hESC) have the capacity for self-renewal and pluripotency, making them a primary candidate for tissue engineering and regenerative therapies. Research on hESC has progressed significantly since their first derivation in 1998. To date, numerous human embryonic stem cell lines have been developed and characterized. Under specific conditions, stem cells can differentiate into a diverse population of mature and functionally specialized cell types. There are two main types of human stem cells classified according to their source and developmental potential: embryonic and adult, or tissue-specific, stem cells. hESCs are pluripotent cells that can differentiate into all types of somatic and in some cases, extraembryonic tissues. They are derived from nonembryonic tissues and are capable of generating specific cells from its organ or tissue of origin. In this study, we discuss how hESC lines are derived, the means by which pluripotency is monitored, and their ability to differentiate into all three embryonic germ layers will be determined. We Also outline the methods currently employed to direct their differentiation into populations of tissue specific, functional cells and highlight the hESC clinical applications. These studies will pave the way toward determining the therapeutic benefit of hESCs in regenerative medicine. Keywords: Stem Cell, Human embryonic, Regenerative

A Review of the Effectiveness of Resilience Training on Life Expectancy and psychological well-being and Cancer Patients' Quality of Life

Ghodrat Ghazipoor

Cancer is a term that encompasses more than 200 diseases and neoplastic that has a long history; so, that there have been malignant diseases before creating mankind. They affect not only the animals, but also on the life of plants.
The most life expectancy researches is about the cancer patients. Since this disease is the agentthreatening of life expectancy. Thus, it is important dealing with a form of psychotherapy thatconsiders the hope as original purpose of change. Psychological well-being is a factor that posits positive psychosocial aspects of human beings. When a person's well-being is reduced, he or she may have psychological problems, such as feeling lonely and depressed in life. It is important to address the psychological well-being of cancer patients.
Keywords: Effectiveness, Resilience, Life Expectancy, Quality of Life, Cancer Patients, well-being

مروری بر عوارض عفونی بعد از پیوند سلول های بنیادی

الهام رحمانیان

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۲-کارشناس پرستاری

مقدمه: عفونت شایعترین و یارزترین عامل مرگ و میر در بیماران بعد از پیوند سلول های بنیادی است. فرایند پیوند و درمان های اضافی سرکوب کننده ایمنی برای درمان پیونددرمقابل بیماری میزبان، می تواند مواقص موجود در عملکرد ایمنی سلولی و هومورال را طولانی و عمیق تر نماید. این مطالعه مروری با هدف ارزیابی مقالات مرتبط با عوارض عفونی بعد از پیوند سلول های بنیادی می باشد.

روش ها: این مطالعه با استفاده از منابع ثانویه و با جستجوی مجلات، پایگاه های داده ای، و منابع الکترونیک با کلید واژه های پیوند سلول های بنیادی ، عفونت و کلمات معادل در پایگاه های داده ای، Pubmed, Google scholar, Sciencedirect, به زبان انگلیسی و بدون محدودیت زمانی انجام شد.

نتایج: درمجموع۱۷۶ مقاله یافت شدکه پس ازبررسی عناوین وخواندن خلاصه مقاله،مقالات کاملاًمرتبط انتخاب شدند. نتایج حاصل از ۱۷ مقاله مرتبط پس ازخواندن متن کامل گزارش شد.

نتیجه گیری: باکتری ها، قارچ ها یا عفونت های ویروسی، شایعترین و بارزترین عامل مرگ در گیرندگان پیوند می باشد. لذا پیروی از معیارهای پیشگیری در دوره بعد از پیوند لازم بوده، و درمان های جدید در این راستا حائز اهمیت است.

Molecular imaging in stem cells therapy

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Stem cell therapies provide unique opportunities for treating diseases. Successful implementation of cell therapies will require a better understanding of cell fate after transplantation, which can be achieved by the application of molecular imaging. Molecular imaging enables the longitudinal, non-invasive assessment of cellular behavior in vivo following cell transplantation. Signal generated from cells can be visualized using imaging systems such as fluorescence imaging (FLI), bioluminescence imaging (BLI), single photon emission computed tomography (SPECT), positron emission tomography (PET), or magnetic resonance imaging (MRI). Here, we review the recent advances, challenges and future perspectives and opportunities in stem cell tracking and functional assessment, as well as the advantages and challenges of each imaging approach.

Keywords: Stem Cell, Molecular Imaging, Cell Tracking

Protective effect of royal jelly against cyclophosphamide induced thrombocytopenia in rat

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Objective: Despite the effective potential of chemotherapy in cancer treatment, several side effects were reported till now. Namely, Cyclophosphamide (CP) induces deleterious effects in both cancer and normal cells. Royal jelly (RJ) has a lot of beneficial effects such as anti-oxidant and anti-inflammatory properties. The aim of present study was to examine the protective effect of RJ against CP-induced thrombocytopenia in rat.
Material and methods: In this experimental study, male Wistar rats were divided into six groups (n=8/group); control, CP, RJ (100 mg/kg), RJ (200 mg/kg), RJ (100 mg/kg) +CP and RJ (200 mg/kg) +CP groups. RJ doses were administrated orally for 14 days. Then, CP dosages (100, 50 and 50 mg/kg) was injected intraperitoneally on 15th, 16th, 17th days, respectively. Animal were dissected three days after the last injection of CP. Hematological parameters and serum levels of platelet factor 4 (PF4) were measured.
Results: CP was caused significant decrease in the number of platelets, red and white blood cells ($p=0.000$), whereas serum levels of PF4 was significantly increased. These changes were significantly protected by RJ pretreatment in RJ100+CP and RJ200+CP groups. **Conclusion:** RJ prevented CP-induced induced thrombocytopenia and leukopenia in rat.
Key Words: Thrombocytopenia, Cyclophosphamide**,** Platelet.

A Comprehensive Review on Up-To-Date Clinical Applications of Platelet-Rich Plasma (PRP)

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Background and aims: The aim of this review is the evaluation of present and the last clinical literature on the use of platelet-rich plasma (PRP). Platelet-rich plasma (PRP) has recently introduced as a hopeful autologous treatment in regenerative medicine. PRP is a high concentration of platelets derived from whole blood which is isolated by centrifugal force to separate and concentrate platelet-containing plasma from red and white blood cells. This product contains numerous bioactive elements, including cytokines, growth factors, vasoactive peptides, and hemostatic substances that may potentially stimulate and accelerate healing of damaged tissues. In addition to availability, eye-catching features of PRP are the constitutional release of several growth factors from activated platelets along with the lack immunogenicity. Due to these exclusive biological characteristics, countless increasing medical uses are emerged in regenerative medicine.

Methods: For this purpose, a comprehensive survey of existing databases was conducted using relevant keywords.

Results: Although not limited to these cases, therapeutic applications of PRP includes the employment of several practical procedures for regeneration of damaged tissues in conditions related to musculoskeletal injuries, hair loss, aesthetic conditions, wounds, skin rejuvenation, breast expansion, and so on.

Conclusion: Although PRP treatment has many proven valued characteristics and promising future for a safe and efficient intervention, further studies and clinical trials are necessary to improve our understanding regarding its benefits and drawbacks in clinical applications.

Keywords: Platelet-Rich Plasma (PRP), Regenerative Medicine, Clinical Applications, Treatment, benefits and drawbacks.

GVHD

محبوبه کاظم پور

محبوبه کاظم پور

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GVHDیک عارضه شایع در پیوند آلوژن سلول‌های بنیادی خون‌ساز است، که به علت شناسایی لنفوسیت‌های T-cell و سلول‌های NK فرد دهنده علیه بافت‌های گیرنده پیوند به وجود می‌آید. پاسخ ایمنولوژیک زمانی رخ می‌دهد که ریسک فاکتورهایی از قبیل: شدت ناسازگاری HLA بین دهنده پیوند و گیرنده،تفاوت سن بین دهنده پیوند و گیرنده ، تفاوت جنسیت و منبع سلول‌های بنیادی، عوامل مستعد کننده بروز GVHD هستند. GVHDبه دو نوع حاد (Acute) و مزمن بر اساس زمان (Chronic)تقسیم می‌شود. در نوع حاد علائم معمولاً در ۱۰۰ روز اول پس از پیوند بروز می‌کنند،طی این زمان مغز استخوان جدید شروع به تولید سلول‌های خونی می‌کند و سلول‌های ایمنی فرد اهداکننده شروع به حمله به سلول‌های سالم فرد گیرنده می‌کند و اندام‌های پوست (خارش، قرمزی)، کبد (بالا رفتن آنزیم‌های کبدی) و سیستم گوارش (تهوع ،استفراغ ، اسهال آبکی) را تحت تأثیر قرار داده و درگیر می‌کند .

در نوع مزمن، علائم معمولاً ۱۰۰ روز دوم پس از پیوند بروز می‌کنند و شدت علائم خفیف تراز نوع حاد است ولی بااین‌حال اندام‌های ریه، پوست، مفاصل، مخاط دهان و غدد اشکی را نیز درگیر می‌کند.

درمان این عوارض استفاده از داروهای متوترکسات، سیکلوسپورین و مقادیر بالای کورتیکواستروئید(متیل پردنیزولون) برای مهار GVHDاست. رعایت نکات ویژه کنترل عفونت و حمایت روحی روانی در این بیماران توسط تیم درمان و خانواده در این ایام از اهمیت بسزایی برخوردار می‌باشد.

Antimicrobial Resistance of Bacterial Uropatho-gens Isolated from Iranian Kidney Transplant Recipients

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Introduction:
Urinary tract infection (UTI) is a major complication in patients who receive the kidney transplant. Transplant individuals are affected by a variety of viral, protozoa, fungal and bacterial infections.
Purpose: We aimed to evaluate the prevalence and antimicrobial resistance of bacterial uropathogens isolated from Iranian kidney transplant recipients.
Methods: We searched according to PRISMA protocol for UTI infection, prevalence, occurrence and distribution of bacteria and their pattern of antibiotic resistance among Iranian patients who receive kidney transplant through online electronic databases with Mesh terms and text words in published references in both Persian and English languages during 1990-2017. Data analysis was performed using Comprehensive meta-analysis software (CMA) by Cochrane Q and I2 Random Effects Model.
Results: Eleven studies met the eligible inclusion criteria. The prevalence of UTI among kidney transplant patients varied from 11.7% to 67.5%. The combined prevalence of UTI was 32.6%. Among Gram-negative pathogens causing UTI, *E. coli* was the most dominant followed by *Klebsiella pneumonia* with prevalence 41.3% and 11.9%, respectively. Also, amongst Gram-positive bacteria, the highest prevalence belonged to *Enterococcus* spp. (9.8%) and coagulase negative Staphylococci (9.4%). Also in Gram-negative pathogens, the most resistance was to Ampicillin (91.2%), followed by Ceftazidime (89.5%). The minimum resistance was against Imipenem with prevalence 14.3%.
Conclusion: The combined prevalence of UTI was 32.6%. Gram-negative pathogens especially *E. coli* were the most agents of UTI in Iranian patients who receive kidney transplant. Also, in gram-negative pathogens, the most resistance was to Ampicillin that it needs a new strategy for prophylaxis and treatment of UTI after the kidney transplant.
Keywords: Kidney transplant; Urinary tract infection; Iran

مروری بر شیوع عفونت فعال سیتومگالو ویروس در دریافت کنندگان پیوند کلیه

سپیده خدامرادی

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مقدمه: سیتومگالوویروس یک پاتوژن مهم در بیمارانی که سیستم ایمنی آنها تضعیف شده است از جمله بیماران دریافت کننده پیوند اعضای بدن محسوب می شود. عفونت، در بیماران دریافت کننده پیوند کلیه خصوصا عفونت اولیه و همراه با ویرمی (وجود ویروس در خون) ممکن است با بروز علائم شدیدی مانند پنومونی، هپاتیت و کوریورتینیت همراه باشد و حتی در مواردی منجر به مرگ می شود. هدف این مطالعه، مروری بر شیوع عفونت فعال سیتومگالو ویروس در دریافت کنندگان پیوند کلیه بود.

روش کار: مطالعه مروری حاضر در سال ۱۳۹۸ انجام شد. در این مطالعه پایگاه داده های SID; Magiran; Scopus, ProQuest; MEDLINE; EMBASE; Web of Science با کلید واژه های CMV, transplantation, kidney transplantation, Iran و بکارگیری عملگرهای AND و OR در عنوان و یا چکیده مقالات جستجو شدند. از معیارهای ورود در این مطالعه مطالعات مشاهده ای مرتبط که به زبان فارسی و یا انگلیسی منتشر شده باشند، بود که بدون محدودیت زمانی وارد فرایند مطالعه شدند. مطالعات درصورت کیفیت پایین و عدم دسترسی به متن کامل از مرور حذف شدند که جهت ارزیابی کیفیت مطالعات نیز از چک لیست استاندارد استروب STROBE استفاده شد. همچنین جهت استخراج داده ها از چک لیستی متشکل از ایتم هایی از جمله نویسنده اول و سال انتشار مقاله، نوع مطالعه، حجم نمونه، میانگین سنی بیماران در زمان پیوند کلیه، میانگین سن بیماران در زمان تشخیص cmv، میانگین فاصله ی زمانی از زمان پیوند تا زمان تشخیص عفونت CMV استفاده شد.

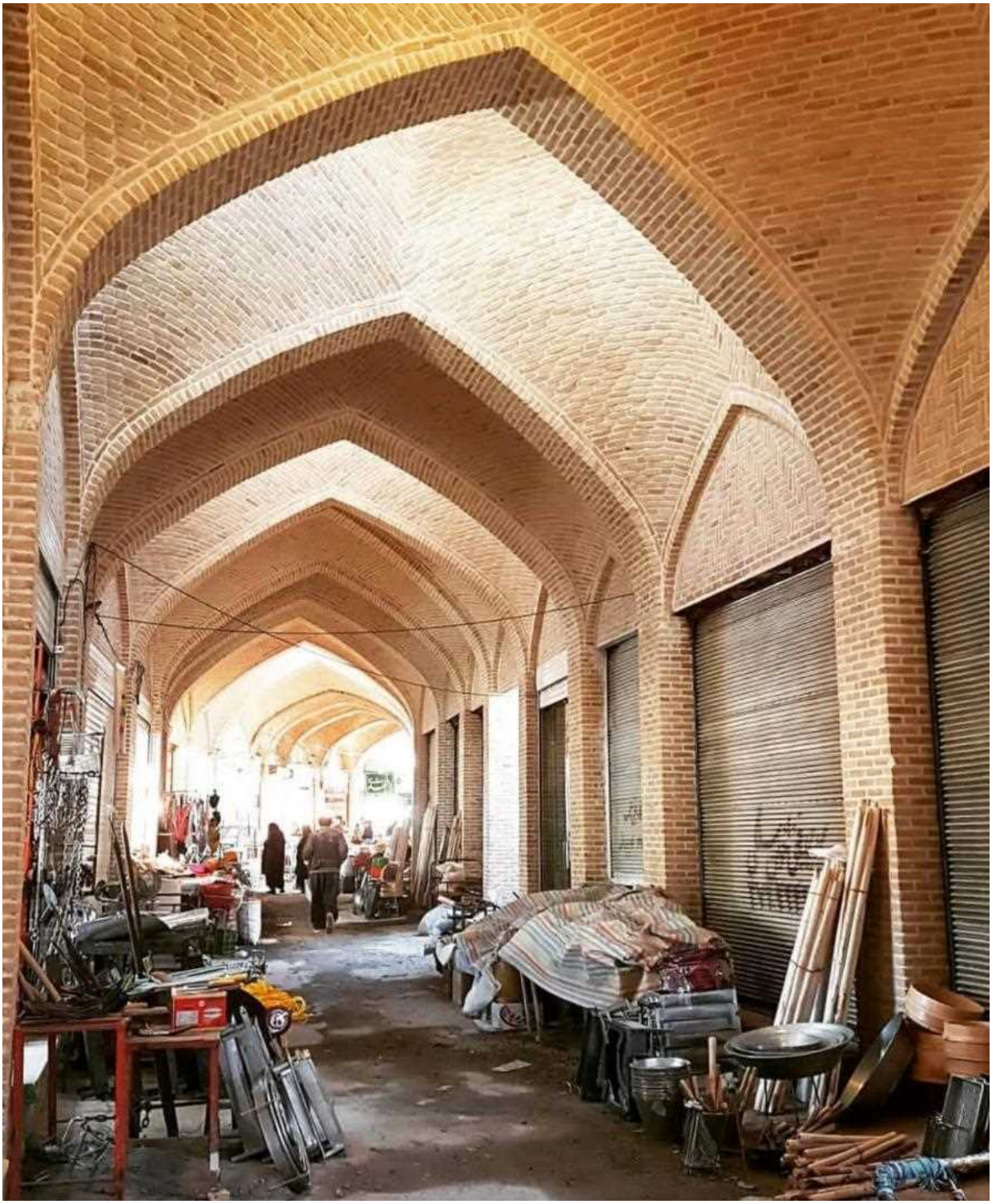
نتایج: از ۶۳ مطالعه حاصل شده،در نهایت ۸ مطالعه مرتبط واجد شرایط بر اساس معیارهای ورود و خروج وارد فرایند مطالعه شدند. ۷۰٪ بیماران مرد و۳۰٪ زن بودند که گروه سنی ۷۰-۶۰ سال بیشترین و گروه سنی ۳۰-۲۰ سال کمترین شیوع CMV را داشتند ۴۱ درصد عفونتها در ماه اول و مابقی درماه دوم تا ششم اتفاق افتاد. بین شیوع سرمی آنتی بادی IgG بر ضد ویروس سایتومگال با سن ارتباط معنی دار موجود بود (P<۰/۰۵) ولی با جنس ارتباطی به دست نیامد.

نتیجه گیری: یافته های فوق نشان می دهند که میزان موارد عفونت سیتومگالوویروس در بیماران پیوند کلیه در ایران زیاد می باشد و اکثر موارد عفونت فعال مشاهده شده در این بیماران ناشی از عفونت ثانویه در آنهاست.

واژه‌های کلیدی: سیتومگالوویروس، پیوند کلیه، شیوع، ایران

دیدنی ها و آثار

باستانی کرمانشاه




BISOTUN, KERMANSHAH, IRAN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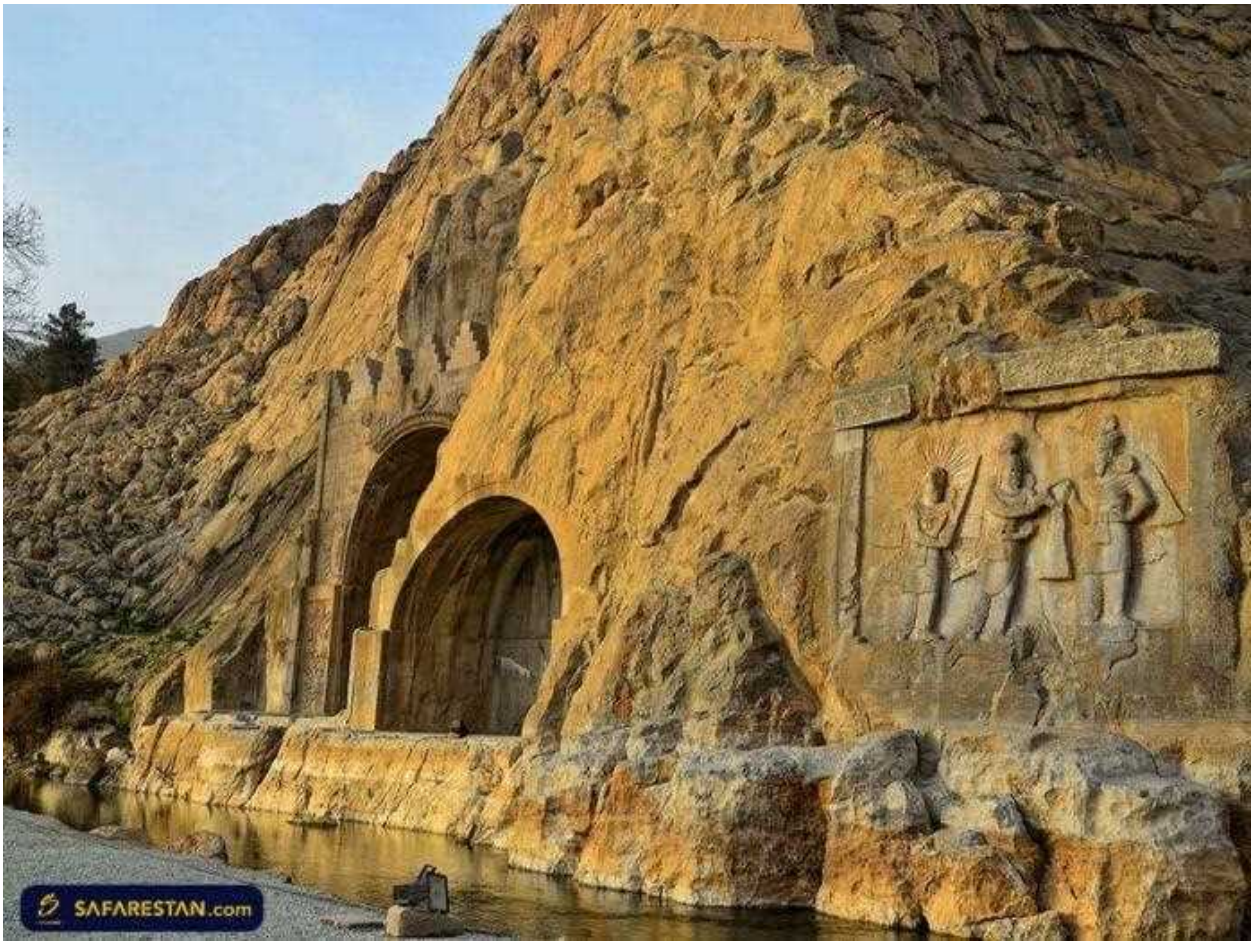
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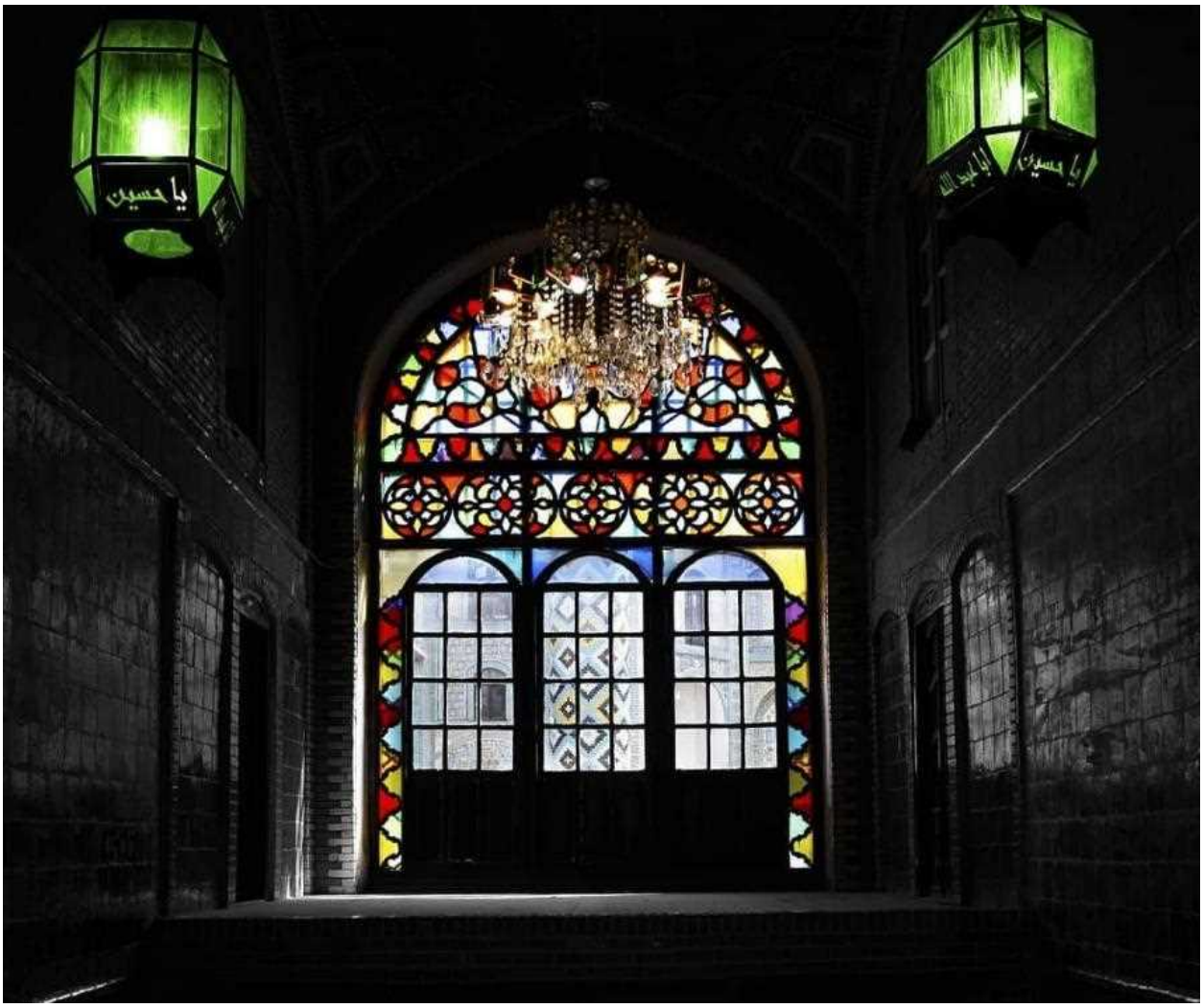
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