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﴿ يَا مَنْ اسْمُهُ دَوَاءٌ وَذِكْرُهُ شِفَاءٌ ﴾



7th Annual Congress of IRRA  
Shiraz Oct 2013



هفتمین کنگره سالانه انجمن  
روماتولوژی ایران شیراز مهر ۱۳۹۲



# روماتولوژی

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این کتاب به صورت رایگان در اختیار تمامی شرکت کنندگان و مدعوین هفتمین کنگره سالیانه انجمن روماتولوژی ایران، شرکت های تجهیزات پزشکی مرتبط با موضوع کتاب، مراکز درمانی متقاضی مربوطه و سایر مؤسسات طرف قرارداد رسانه تخصصی قرار می گیرد.

مجموعه کتابهای جامع  
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## پیام رئیس انجمن روماتولوژی ایران

انجمن روماتولوژی ایران  
تاسیس ۱۳۵۲

علم روماتولوژی مانند سایر علوم تجربی به خصوص در زمینه پزشکی هر روز دستخوش تحولات جدید و پیدایش افق‌های جدیدتر در تشخیص و درمان بیماریهای مربوط به آن است. بر این اساس انجمن روماتولوژی ایران همه ساله سمیناری را تحت عنوان تازه‌های روماتولوژی با همکاری اساتید و دانشمندان این رشته برگزار می‌کند. تا با ارائه جدیدترین تحقیقات و دستاوردهای علمی داخلی و خارجی راهکارهایی در درمان بیماران این رشته که به دلیل ماهیت مزمن خود موجب ناتوانی و از کار افتادگی انسانها و تحمیل هزینه های مختلف بر آنها و نیز جوامعی که در آن زندگی می‌کنند می‌گردد، باشد.

برنامه چشم‌انداز ۲۰ساله جمهوری اسلامی ایران افقی را فراروی مسئولین و دانشمندان کشور قرار داده است که تا سال ۲۰۲۰ باید سرآمد منطقه از نظر تولید علم باشند. اینکه هم اکنون براساس ممیزی انجام شده توسط انجمن روماتولوژی ایران در سال ۲۰۰۹ از نظر تولید علمی کشور ترکیه با ۳۵۱ مقاله و رتبه ۱۴۰ جهان مقام اول و ایران با ۹۲ مقاله و رتبه ۳۲ جهانی مقام دوم را در منطقه دارد نشان دهنده فاصله ی زیاد کشور ما با افق پیش رو در برنامه چشم‌انداز می‌باشد. اگرچه فعالیتهای زیادی در این چند سال پس از ممیزی در جهت ارتقاء تولیدات علمی انجام شده است ولی همچنان نیازمند تلاش بی‌وقفه همکاران در دانشگاهها و مراکز علمی، تحقیقاتی سراسر کشور هستیم. نوید راه اندازی مجله‌ی علمی انجمن روماتولوژی ایران تحت عنوان "Rheumatology Research" گام مثبتی در جهت نیل به اهداف چشم‌انداز می‌باشد که امید است با همت و همکاری همه‌ی عزیزان عضو انجمن منشاء آثار مهمی در جهت تولید علم روماتولوژی باشد.

هفتمین کنگره سالیانه انجمن روماتولوژی ایران یکی از راهکارهای این انجمن جهت نیل به این اهداف می‌باشد. این همایش به همت همکاران عزیز و دانشمند انجمن در دانشگاه علوم پزشکی شیراز برگزار شده است، بر خود لازم می‌دانم ضمن گرامیداشت یاد و خاطره‌ی استاد ارجمند جناب آقای دکتر محمد سلامی که به همراه استاد گرانقدر جناب آقای دکتر اکبر رجایی

از بنیانگزاران علم روماتولوژی در دانشگاه علوم پزشکی شیراز بوده‌اند از زحمات بی‌شائبه جناب آقای دکتر رجایی که انجمن روماتولوژی استان فارس مدیون تلاشهای روزافزون ایشان میباشد و برگزاری این سمینار هم به همت ایشان و همکاران عزیزشان بوده است قدردانی نموده، از خداوند منان برای ایشان و سایر همکارانشان در دانشگاه علوم پزشکی شیراز آرزوی سلامت و موفقیت نمایم.

امید است این همایش نیز مانند سالهای گذشته موجب شکوفایی علم روماتولوژی در کشور عزیزمان ایران باشد.

با تشکر

دکتر احمدرضا جمشیدی



## پیام رئیس کنگره

### همکاران گرامی

جای بسی خوشحالی و خوشوقتی که ورودتان را به شیراز جهت شرکت در کنگره روماتولوژی خیر مقدم می‌گویم و از طرف کمیته برگزارکننده این کنگره از حضورتان در شیراز تشکر و قدردانی نمایم. به خصوص از شرکت کنندگان که جهت سخنرانی دعوت ما را پذیرفته‌اند که حضورشان باعث پربار بودن سطح علمی این کنگره خواهد بود. در این کنگره مطالب علمی جدید و مطالب علمی تغییر یافته بصورت سخنرانی‌ها پوسترها میزگردها و سایر برنامه‌های تنظیم شده معرفی ارائه خواهد شد جا دارد که از هیات علمی کمیته برگزار کننده این کنگره و همه آنهایی که در برپایی این کنگره سهیم بوده‌اند قدردانی نموده و برای همه مهمان عزیز روزهای خوشی را در شهر شیراز زادگاه حافظ و سعدی داشته و مجدداً به گرمی مقدمتان را گرامی می‌داریم.

دکتر اکبر رجایی

فوق تخصص روماتولوژی

استاد بخش روماتولوژی دانشگاه علوم پزشکی شیراز

## پیام دبیر علمی کنگره



توفیق الهی یار شد که هفتمین کنگره سالیانه انجمن روماتولوژی ایران باحضور محققین ارجمند و همکاران گرامی از سرار کشور در دانشگاه علوم پزشکی شیراز برگزار می‌گردد. با توجه به این که علایم بیماری‌های روماتیسمی و یا شبه روماتیسمی از جمله شکایت‌های شایع عموم بیماران می‌باشد لذا بحث و تبادل نظر پیرامون مباحث مربوطه در چنین نشست‌هایی برای تمام پزشکان به خصوص اساتید محترم روماتولوژیست ضروری به نظر می‌رسد. در این کنگره سعی بر این خواهد بود تا مدعوین محترم با تازه‌های تشخیصی و درمانی بیماری‌های روماتیسمی آشنا گردند. گردهمایی علمی بصورت سخنرانی اساتید و در کنار آن برگزاری کارگاه‌های عملی در زمینه‌های کاپیلاروسکوپی و سنجش تراکم استخوان برگزار خواهد شد. مقالات ارسالی بصورت پوستر و سخنرانی ارائه می‌شوند. قبلاً از همراهی کلیه همکاران و دوستان خصوصاً اعضا محترم هیئت مدیره، پرسنل کوشا، و سایر عوامل در تیم‌های علمی و اجرایی تشکر می‌نمایم.

دکتر زهرا حبیب آگهی

فوق تخصص روماتولوژی

استادیار بخش روماتولوژی دانشگاه علوم پزشکی شیراز





## پیام دبیر اجرایی کنگره

خداوند متعال را سپاسگزاریم که یاری امان کرد تا بتوانیم خدمتگزار مهمانان و مدعوین گرامی هفتمین کنگره سالیانه انجمن روماتولوژی ایران باشیم، در ابتدا لازم می‌دانم از حضور یکایک همکاران بزرگوار و شرکت کنندگان گرامی تشکر و قدردانی نمایم.

تمام تلاش کمیته اجرایی برای حضور حداکثری همکاران و شرکتهای وابسته برای تحقق این امر سعی گردید شرایط مناسبی برای حضور همکاران و مهمانان گرامی مهیا گردد. برای پربار شدن بار علمی کنگره دو کارگاه آموزشی متنوعی طراحی گردیده است که امیدواریم کلیه شرکت کنندگان بتوانند به نحوی مطلوب از این کارگاهها بهره‌مند شوند.

همچنین برای احترام به کلیه سلايق و نیازهای همکاری علاوه بر ارائه مقالات متنوع چه در بخش سخنرانی، چه در بخش پوستر، تنوع غرفه‌های نمایشگاهی و کارگاهها، شرایط مناسبی جهت رفاه حال شرکت کنندگان فراهم گردیده است که امیدوارم مورد رضایت همه همکاران گرامی قرار گیرد و استدعا دارم حتماً عیوب و نواقص احتمالی این کنگره را جهت اصلاح برای کنگره‌های آتی به ما اعلام نمایند.

در پایان ضمن خوش آمد گویی به همه عزیزان و صاحب نظران از سراسر کشور و میهمانان گرامی خارج از کشور از همه همکارانم که در برگزاری این همایش ما را یاری کردند، به خصوص اعضاء محترم کمیته علمی و اجرایی که به دنبال یکسال سعی و تلاش مستمر و دلسوزانه برای هر چه بهتر برگزار نمودن آن زحمت کشیدند تشکر کنم و انشاء... با نظرات و پیشنهادات ارزشمند شرکت کنندگان ارجمند مسیر مناسبتری برای اجرای برنامه در سال‌های آینده بیابیم. توفیق روز افزون شما را از درگاه خداوند خواستارم.

دکتر محمد علی نظری نیا

فوق تخصص روماتولوژی

دانشیار بخش روماتولوژی دانشگاه علوم پزشکی شیراز

## محورهای کنفرانس

### هدف کلی کنگره:

ارتقاء سطح علمی شرکت کنندگان در کنگره سالیانه انجمن روماتولوژی ایران

### اهداف اختصاصی:

- ۱- آشنایی با تازه های بیماری اسکلرودرمی و درگیری ارگانهای حیاتی در این بیماری
- ۲- آشنایی با تازه های بیماریهای واسکولیت و عوارض ناشی از این بیماری و درمان لازم
- ۳- آشنایی با تازه های بیماری بهجت و نحوه درمان ارگانهای حیاتی
- ۴- آشنایی با تازه های بیماری لوپوس و درمان آن
- ۵- آگاهی لازم در مورد تازه های تشخیصی و درمانی آرتريت روماتوئید
- ۶- آشنایی با تشخیص و پیگیری تشخیصی درمانی بیماری پوکی استخوان
- ۷- آشنایی با علائم روماتولوژی در بیماریهای مختلف داخلی

### سپاس ویژه:

- وزارت بهداشت درمان و آموزش پزشکی
- انجمن روماتولوژی ایران
- ریاست دانشگاه علوم پزشکی شیراز
- معاونت درمان دانشگاه علوم پزشکی شیراز
- حراست دانشگاه علوم پزشکی شیراز
- معاون پژوهشی و فناوری دانشگاه علوم پزشکی شیراز
- مدیر فناوری اطلاعات و ارتباطات دانشگاه علوم پزشکی شیراز
- مدیریت و اعضای دفتر روابط بین الملل و امور بین الملل دانشگاه علوم پزشکی شیراز
- دفتر آموزش مداوم دانشگاه علوم پزشکی شیراز
- واحد سمعی بصری دانشگاه علوم پزشکی شیراز
- کلیه نهادها و شرکت های دارویی و تجهیزاتی که در این کنگره ما را همراهی نموده اند.

**ارکان هفتمین کنگره سالیانه انجمن روماتولوژی ایران**

۲۴ لغایت ۲۶ مهر ۱۳۹۲

سالن همایش سینا و صدرا دانشگاه علوم پزشکی شیراز

**رئیس انجمن روماتولوژی ایران:****دکتر احمد جمشیدی**

(استاد دانشگاه علوم پزشکی تهران)

**رئیس کنگره:****دکتر اکبر رجایی**

(عضو هیات علمی دانشگاه علوم پزشکی شیراز)

**دبیر علمی کنگره:****دکتر زهرا حبیب آگهی**

(عضو هیات علمی دانشگاه علوم پزشکی شیراز)

**دبیر اجرایی کنگره:****دکتر محمد علی نظری نیا**

(عضو هیات علمی دانشگاه علوم پزشکی شیراز)

## اعضاء کمیته علمی

- |                              |                          |
|------------------------------|--------------------------|
| پروفسور کامران باقری لنکرانی | پروفسور اکبر رجایی       |
| دکتر افشین برهانی حقیقی      | دکتر احمد رضا جمشیدی     |
| دکتر رحیم کشمیری             | پروفسور فریدون دواچی     |
| دکتر عبدالرحمان رستمیان      | پروفسور شیدا شمس         |
| دکتر محمد حسین فره وش        | دکتر فرهاد شهرام         |
| دکتر کریم مولا               | دکتر محمود اکبریان       |
| دکتر احمد سلیم زاده          | پروفسور غلامعلی ناصح     |
| دکتر هادی کریم زاده          | دکتر محسن سروش           |
| دکتر مریم مقدسی جهرمی        | دکتر عبدالهادی ناجی      |
| دکتر معصومه اخلاقی           | دکتر سوسن سروش           |
| دکتر غلامحسین علی شیری       | دکتر علیرضا خبازی اسکویی |
| دکتر اعظم امینی              | دکتر الهام افلاکی        |
| دکتر سیده زهرا میرفیضی       | دکتر محمد رضا شکیبی      |
| دکتر لیلا زاهدی کشکولی       | دکتر علی محمد فاطمی      |
| دکتر سید منصور حسینی         | دکتر وحید ضیایی          |
| دکتر ایرج صالحی ابری         | دکتر سهراب فلاحی         |
| دکتر زهرا حبیب آگهی          | دکتر سعیده شنونده        |
| دکتر حسین سلیمانی            | دکتر علی اصغر ابراهیمی   |
| دکتر محمد حسن جوکار          | دکتر علی دهقان           |
| دکتر مهرداد آقایی            | دکتر سیده طاهری فائزی    |
| دکتر معصومه بابایی           | دکتر مهرزاد حاج علیلو    |
| دکتر منصور ثالثی             | دکتر علیرضا رجایی        |
| دکتر سیده زهرا میرفیضی       | دکتر کیوان گوهری مقدمی   |
| دکتر شهرام بهاروند           | دکتر محمد علی نظری نیا   |
| دکتر نگین محتشم              | دکتر وحید ضیایی          |
| دکتر پیمان متقی              | دکتر فرهاد غریب دوست     |
| دکتر زهرا حبیب آگهی          | دکتر مهدی کفاشان         |

## اعضاء کمیته اجرایی

دبیر اجرایی: دکتر محمد علی نظری نیا

مدیر اجرایی: خانم مریم طلاب زاده

- دکتر زهرا حبیب آگهی
- دکتر الهام افلاکی
- دکتر سعیده شنونده
- آقای مهدی رودکی
- آقای روزبه مرادی

## اسامی شرکتهای بخش نمایشگاهی

حامیان ویژه:

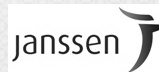




حامی طلایی



حامی نقره‌ای



حامی برنزی





7th Annual Congress of  
Shiraz Oct 2013



هفتمین کنگره سالانه انجمن  
روماتولوژی ایران شیراز مهر ۱۳۹۲

# هفتمین کنگره سالانه انجمن روماتولوژی ایران

زمان: ۲۴ لغایت ۲۶ مهر ۱۳۹۲  
دانشگاه علوم پزشکی شیراز

7th Annual Congress of Iranian  
Rheumatology Association  
Shiraz University of Medical Sciences  
16-18 October 2013



## دارای امتیاز آموزش مداوم

مهلت ارسال مقالات: ۱۵ شهریور ۱۳۹۲

آدرس دبیرخانه: شیراز - بیمارستان نمازی دفتر بخش داخلی  
تلفکس: ۰۷۱۱-۶۴۷۴۳۱۶ - ۰۹۲۱۷۲۷۵۶۴۷  
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محل برگزاری: شیراز - دانشگاه علوم پزشکی  
خیابان نشاط - سالنهای کنفرانس صدرا و سینا



# برنامه روزانه

هفتمین کنگره سالیانه انجمن روماتولوژی ایران

۲۴-۲۶ مهر ۱۳۹۲

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## پنجشنبه ۱۳۹۲/۷/۲۵ (صبح)

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AMGEN

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## Program

The 7<sup>th</sup> Annual Congress of Iranian Rheumatology Association  
Shiraz University of Medical Sciences 16-18 OCT 2013

Wednesday 16 October 2013	
7:30-8:00	<b>Registration</b>
8:00-8:30	<b>Opening Ceremony (Sina Hall)</b>
	<p>Recitation of the Holy Qur'an &amp; National Anthem of the Islamic Republic of Iran</p> <p><b>Words of Welcome:</b></p> <p><b>President of Shiraz University of Medical Sciences:</b> Dr. Imaniyeh M.H</p> <p><b>Congress President:</b> Prof. Rajae A.</p> <p><b>President of Iranian Association of Rheumatology:</b> Dr. Jamshidi A.R</p>
8:30-9:15	<p><b>Main Lecture</b></p> <p><b>Early synovitis and undifferentiated arthritis:</b> Prof. Rajae A. <b>Chairs:</b> Dr. Akbariyan M, Dr. Shafizadeh M, Dr. Keshmiri R.</p>
9:15-10:00	<b>Discussion &amp; comments</b>
10:00-10:30	<b>Coffee Break</b>
10:30-12:00	<p><b>Symposium</b></p> <p><b>Systemic Diseases in Rheumatology</b></p> <p><b>Approach to liver problems in rheumatology diseases:</b> Prof. Bagheri Lankarani K.</p> <p><b>Rheumatologic manifestations of metabolic disease:</b> Dr. Soroush M.</p> <p><b>Rheumatologic manifestations of malignancies:</b> Dr. Khabazi A. R.</p> <p><b>New insights in sarcoidosis:</b> Dr. Aflaki E.</p> <p><b>Chairs:</b> Dr. Rostamiyan M, Dr. Farahvash M.H, Dr. Kafashan M.</p>
12:00-13:00	<p><b>Panel Discussion:</b> Prof. Bagheri Lankarani K, Dr. Soroush M, Dr. Khabazi A.R. <b>Moderator:</b> Dr. Aflaki E.</p>
13:00-14:00	<b>Prayers &amp; Lunch Break</b>
14:00-15:20	<p><b>Symposium</b></p> <p><b>Vasculitis</b></p> <p><b>New classification criteria of vasculitis:</b> Dr. Shakibi M.R.</p>

	<p><b>Cryoglobulinemic vasculitis:</b> Dr. Fatemi A.M.  <b>Common vasculitis in Children:</b> Dr: Zeaei V.  <b>Treatment of ANCA associated vasculitis (new insights):</b>                  Dr. Fallahi S.  <b>Chairs:</b> Dr. Mola K, Dr. Karim Zadeh H, Dr. Salimzadeh A.</p>
15:20-16	<p><b>Panel Discussion:</b>                  Dr. Fatemi A.M, Dr. Zeaei V, Dr. Fallahi S.  <b>Moderator:</b> Dr. Shakibi M.R.</p>
16:00-16:20	<p><b>Coffee Break</b></p>
16:20-18:05	<p><b>Oral Paper Presentation &amp; Poster Viewing (Session A)</b>  <b>Chairs Oral presentation:</b> Dr. Baharvand Sh, Dr. Mohtasham N,                  Dr. Aghaei M.</p>
17:00-20:00	<p><b>Work shop Capillaroscopy (EDC Hall)</b>                  Chair: Dr. Shenavandeh S.</p>
18:05-19:00	<p>Satelite Symposium (ARYOGEN)                  (By invention only)</p> <p style="text-align: center;">                       آریوژن زیست دارو                 </p>

<b>Tuesday 17 October 2013</b>	
7:55-8:00	Recitation of the Holy Qur'an
8:00-8:25	<b>Main Lecture</b> <b>Epidemiology of rheumatologic diseases in IRAN:</b> Prof. Davatchi F. <b>Chairs:</b> Prof. Rajae A, Dr. Hatef M.R.
8:25-8:50	<b>JIA, Diagnosis &amp; Treatment:</b> Prof. Naseh Gh A.
8:50-9:05	<b>Discussion &amp; comments</b>
9:05-10:00	<b>Annual Iranian Rheumatology Association Meeting</b> (Iranian Rheumatology Association Members)
10:00-10:30	<b>Coffee Break</b>
10:30-12:00	<b>Symposium</b> <b>Behcet Disease</b> <b>New Behcet disease criteria:</b> Prof. Davachi F. <b>Mucocutaneous manifestations of Behcet disease:</b> Prof. Shams S. <b>Neurobehcet:</b> Dr. Borhan Haghghi A. <b>New advances in treatment of Behcet disease:</b> Dr. Shahram F. <b>Chairs:</b> Dr. Alishiri Gh, Dr. Moghadasi M, Dr. Akhlaghi M.
12:00-13:00	<b>Panel Discussion:</b> Prof. Shams S, Dr. Borhani Haghghi A, Dr. Shahram F. <b>Moderator:</b> Dr. Davatchi F.
13:00-14:00	<b>Prayers &amp; Lunch Break</b>
14:00-15:00	<b>Symposium</b> <b>Neurolupus</b> <b>Introduction to neurolupus:</b> Dr. Akbariyan M. <b>Physiopathology of neurolupus:</b> Dr. Dehghan A. <b>Diagnosis and differential diagnosis of neurolupus:</b> Dr. Faeizi T. <b>Treatment of neurolupus:</b> Dr. Hajalilo M. <b>Chairs:</b> Dr. Amini A, Dr. Mirfezi Z, Dr. Zahedi Kashkouli L.
15:00-15:45	<b>Panel Discussion:</b> Dr. Dehghan A, Dr. Faeizi T, Dr. Hajalilo M <b>Moderator:</b> Dr. Akbariyan M
15:45-16:00	<b>Coffee Break</b>
16:00-18:00	<b>Oral Paper Presentation &amp; Poster Viewing (Session B)</b> <b>Chairs Oral presentation:</b> Dr. Babaei M, Dr. Salesi M, Dr. Mirfeizi Z.
17:00-19:00	<b>Work Shop Osteoporosis (EDC Hall)</b> Chair: Dr. Rajae A.R.
19:00-22:00	<b>Congress Dinner (By invention only) (AMJEN)</b>  <b>AMGEN</b>

<b>Friday 18 October 2013</b>	
7:55-8:00	Recitation of the Holy Qur'an
8:00-9:30	<b>Symposium</b> <b>Scleroderma</b> <b>Renal involvement in scleroderma:</b> Dr. Nazarinia M.A. <b>Lung involvement in scleroderma:</b> Dr. Ghohari Moghadam K. <b>Scleroderma in children:</b> Dr. Zeaie V. <b>New insights in Treatment of Scleroderma:</b> Dr. Gharibdoust F. <b>Chairs:</b> Dr. Hosini M, Salehi Abari I, Ebrahimi A.A.
9:30-10:30	<b>Panel Discussion:</b> Dr. Nazarinia M.A, Dr. Ghohari Moghadam K, Dr. Zeaie V. <b>Moderators:</b> Dr. Gharib Doust F.
10:30-11:00	<b>Coffee Break</b>
11:00-12:00	<b>Symposium</b> <b>Ankylosing Spondylitis</b> <b>Pathophysiology of ankylosing spondylitis:</b> Dr. Soroush S. <b>New advances in diagnosis of ankylosing spondylitis:</b> Dr. Naji A.H. <b>New advances in treatment of ankylosing spondylitis:</b> Dr. Jamshidi A.R. <b>Chairs:</b> Dr. Motaghi P, Dr. Solimani H, Jokar M.H.
12:00-13:00	<b>Panel Discussion:</b> Dr. Soroush S, Dr. Jamshidi A.R. <b>Moderators:</b> Dr. Naji A.H.
13:00-14:00	<b>Prayers &amp; Lunch Break</b>



مقالات پذیرفته شده به عنوان

# سخنرانی

Oral Presentation

## Establishing Differentiated Myofibroblast in Human Dermal Fibroblast Culture as a Model of Fibrotic condition

Elham Karimizadeh<sup>1</sup>, Farhad Gharibdoost<sup>2</sup>, Nasrin Motamed<sup>1</sup>, Ahmadreza Jamshidi<sup>2</sup>, Saeideh Jafarinejad F<sup>1</sup>, Habibeh Faridani, Mahdi Mahmoudi<sup>2</sup>

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2-Rheumatology Research Center, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran

### Introduction & Objective:

An important step in the process of fibrosis is transition of fibroblasts into Myofibroblasts. Myofibroblasts play a crucial role during wound healing and tissue fibrosis. These cells are considered to be responsible for the production of extracellular matrix (ECM) components in fibrotic situations. The hallmark of the myofibroblastic phenotype is the expression of  $\alpha$ -smooth muscle actin ( $\alpha$ -SMA). Transforming growth factor- $\beta$ 1 (TGF- $\beta$ 1) induces the expression of  $\alpha$ -SMA and thus contributes to myofibroblast differentiation. The aim of this study was transition of fibroblasts into myofibroblasts using TGF- $\beta$ 1 cytokine and make ECM-producing myofibroblasts as a model for studying molecular biology of fibrosis.

### Material & Methods:

Normal human dermal fibroblasts were derived from forearm of volunteer donors via enzymatic digestion method. Fibroblast cells were treated in different time periods (24, 48, and 72 hours) and different doses of TGF- $\beta$ 1 (2, 10, 25, and 50 ng/ml). Fibroblast differentiation and the expression of  $\alpha$ -SMA were measured by Immunofluorescence assay.

### Results:

Our results show that the expression of  $\alpha$ -SMA in TGF- $\beta$ 1 treated fibroblasts was extensively increased compared with untreated fibroblasts group. We also show that TGF- $\beta$ 1 induces the synthesis of  $\alpha$ -SMA in cultured fibroblasts in time-dependent but not exactly dose-dependent manner.

### Discussion & Conclusion:

At present there is no effective therapy for fibrotic diseases such as systemic sclerosis (SSc). TGF- $\beta$ 1 is believed to be a key mediator of tissue fibrosis, but we know much less about mechanisms that modulate fibroblasts into myofibroblasts. A better comprehension of the myofibroblasts differentiation in different pathological situations will be useful for the understanding of fibrosis development. We achieved a matrix-producing myofibroblast cells as a model to uncover key mechanisms involved in fibrosis.

## Bone Loss in Ovariectomized Rat: The impact of *Eleaegnus angustifolia* Fruit extract on bone mineral density

**Pedram Talezadeh Shirazi<sup>1</sup>, Mohamad Hosein Dabbagmanesh<sup>2</sup>**

1- Namazee Hospital Bone densitometry Center ,Shiraz University of Medical Sciences ,School of Medicine , Shiraz ,Iran

2- Endocrinology & Metabolism Research Center, SUMS ,Shiraz ,Iran

### **Introduction:**

Clinical consequences of decrease in Estrogen level is one of the major problems in post menopausal women. Estrogen beneficial impacts on bone health despite of its unpleasant side effects cause a considerable interests in use of herbal extracts containing flavonoids and phytoestrogen such as Russian Olive in treatment of osteoporosis. This study was conducted to evaluate the effect of Russian Olive fruit extract in bone mineral density in ovariectomized rats.

### **Material and Methods:**

53 Spraque-Dawley female rats randomly divided into 5 different groups; Two groups were considered as sham and control groups, 3 groups were ovariectomized and kept separately for 2 months. then 2 ovariectomized groups were treated with E.A. fruit extract (gavaging 600 mg/kg daily) and esterogen (SC injection 3 mg/kg weekly) for 4 months. Bone densitometry was done for all groups in 2, 4 and 6 months after beginning of study by DEXA method.

### **Results:**

Two months post ovariectomy, significant decrease in bone mineral density was seen in all ovariectomized groups. After four months of gavaging with E.A. fruit extract in ovariectomized rats. Increase in bone mineral density was seen in whole body, spine, femur and tibia regions. However , these increases were statistically significant in tibial region when we compared to untreated ovariectomized rats ( $p<0.05$ ).

### **Conclusion:**

The results shows that *Eleaegnus angustifolia* fruit extract which has been used in traditional folk medicine may have benificail effect in treatment of bone loss in ovariectomized rat. However further research is needed.

### **Key words:**

Osteoporosis, Rat, *Eleaegnus angustifolia* , Russian olive, Bone densitometry

## Assessment of interleukin-6 receptor inhibition with tocilizumab on quality of life and disease activity in patients with rheumatoid arthritis: a multicenter clinical trial

Alshiri Gh<sup>1</sup>, Samim A<sup>2</sup>, Bayat N<sup>1</sup>, Rajaei E<sup>3</sup>, Aflaki E<sup>4</sup>, Aslian A<sup>5</sup>, Rozegari<sup>2</sup>

1. Department of Rheumatology Medicine , Baqiyatallah University
2. Student Research Center Medicine , Baqiyatallah University
3. Department of Rheumatology Medicine , Ahvaz University
4. Department of Rheumatology Medicine , Shiraz University
5. Department of Rheumatology Medicine , Tehran University

### Objective:

Rheumatoid arthritis (RA) remains a major clinical problem with many patients having continuing systemic inflammatory disease resulting in progressive erosive damage and disability. Health-related quality of life (HR-QOL) in patients with rheumatoid arthritis (RA) is significantly impaired as a result of pain, deficits in physical function and fatigue associated with this disease.

Tocilizumab (TCZ) is a recombinant humanized anti-IL-6 receptor monoclonal antibody, administered monthly by intravenous infusion that prevents IL-6 signal transduction.

This multicenter study has done first time in Iran. To evaluate the improvement of health status in patients with rheumatoid arthritis (RA) treated with tocilizumab.

### Methods:

In this multicenter study 24 patients with moderate to severe active rheumatoid arthritis were treated with 8 mg/kg tocilizumab every 4 week for 24 weeks. Disease activity was assessed by Clinical Disease Activity Index (DAS 28) and VAS for pain .Improvement of health status was assessed by Short Form-36 (SF-36).

### Result:

Tocilizumab improved DAS28 significantly at week 48 compared with at baseline (Pvalue0.005). Visual analogue scale was decreased significantly in all patients (Pvalue0.005). In the mean scoring of psychological health of quality of life was after 12 months significantly increased(Pvalue0.005). There wasn't any side effects in clinical and laboratory in patients.

### Conclusion:

In this study quality of life scoring and specially physical and psychological health after treated with tocilizumab significantly increased.

### Key Word:

Quality of life,Rheumatoid Arthritis, Tocilizumab

## Relationship of smoking quantity and disease outcomes in Iranian patients with ankylosing spondylitis

**Sasan Fallahi,<sup>1,2</sup> Ahmad Reza Jamshidi,<sup>2</sup> Mahdi Mahmoudi,<sup>2</sup>**

1- Rheumatologist, Internal Medicine Division, Baharlou Hospital, Tehran University of Medical Sciences (international campus), Tehran, Iran

2- Rheumatology Research Center, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran

### **Introduction and objectives:**

Smoking has been suggested as contributor to poorer outcome in spondyloarthropathies. However, few studies have investigated influence of smoking quantity on outcome of ankylosing spondylitis (AS). To our knowledge, this is the first study to investigate the role of smoking quantity in outcome of AS in an Iranian population.

### **Materials and methods:**

A total of 160 AS patients were consecutively enrolled and evaluated for the status and pack-years of smoking. Outcome measures were included disease activity, quality of life, spinal mobility and sacroiliitis grading. These measures were assessed by Bath AS disease activity index (BASDAI), AS quality of life (ASQoL), Bath AS metrology index (BASMI) and radiography, respectively. Relationship between pack-years of smoking and outcome measures were assessed.

### **Results:**

Smoking quantity was significantly higher in severe sacroiliitis than the moderate and minimal sacroiliitis ( $P=0.001$ ). Univariate analysis revealed association of pack-years of smoking with BASDAI ( $B= 0.05$ ,  $SE= 0.02$ ,  $CI95\%: 0.006$  to  $0.10$ ,  $P= 0.03$ ), ASQoL ( $B= 0.15$ ,  $SE= 0.06$ ,  $CI95\%: 0.04$  to  $0.26$ ,  $P= 0.007$ ) and BASMI ( $B= 0.05$ ,  $SE= 0.02$ ,  $CI95\%: 0.006$  to  $0.08$ ,  $P= 0.03$ ). By multivariate analysis, significant association of pack-years of smoking with BASDAI and ASQoL were maintained. However, association of smoking with BASMI was lost.

### **Discussion and conclusion:**

Independent correlation of smoking quantity with disease activity and quality of life was confirmed in Iranian AS patients. Association with spinal mobility was dependent to associated factors. Smoker patients should be encouraged to quit or less smoke to achieve better outcome.

## Sustained and cumulated response over time in RA patients treated with Rituximab after initial failure of anti-TNF agents

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2-"Dr. I. Stoia" Center for Rheumatic Diseases, Bucharest, Romania;

3-"Sfanta Maria" Clinical Hospital, Bucharest, Romania; 4 "N. Gh. Lupu" Clinical Hospital, Bucharest, Romania

### Background:

Although anti- TNF therapies moved forward the treatment of rheumatoid arthritis (RA), failure of the first anti-TNF medication is not uncommon. Many times modifying dosage/frequency of the initial drug or prescribing a different TNF inhibitor proves to be still inadequate. Using instead a biologic with a different mechanism of action, such as Rituximab (RTX), may be beneficial in terms of RA treatment to target.

### Objectives:

Based on EULAR- T2T and ACR criteria we analysed response following each RTX course (2 g at every 24 weeks).

### Methods:

Longitudinal (2002 to date), observational, population-based, cohort study. The analysis was performed based on data from the National Health Insurance House (NHIH) for 400 out of 1126 patients treated with RTX for RA in October 2011 in the NHIH database. The patients' selection is statistically representative and homogenous at national level. All patients had an anti-TNF medication as first treatment stage for 2.5 years (average). In the second stage, 208 patients were switched to RTX after the initial anti-TNF failure. The remaining 192 patients followed one or two more anti-TNF therapy and only then continued with RTX. A total of 5 RTX courses were administered to both groups. Before each RTX course patient were monitored for OAS28 and EULAR response.

### Results:

Average OAS28 before RTX was 6.7 (N=400), reaching 4.5 (before C2), then 3.41 (before C3). At the time of this analysis 335 patients followed C3 and 211 C4. Before RTX start, 93% of the total number of patients was in HOA and 8% in MOA. After 2 RTX courses 38.25 % of the patients reached LOA or remission. After 18 months (before C4) 63.88 % patients were in LOA or remission, while before C5 86.73% of the 211 patients having C4 were in LOA or remission (48.82% in remission). In terms of EULAR response after 4 RTX cycles 84.36% had a good response and 15.64% a moderate response, compared to previous treatment with anti-

TNF in the same interval (2 years): 5.03% good response and 91.82% moderate response.

	Baseline	W24	W48	W72	W96
OAS28	6.7	4.5	3.41	3	2.6
LOA %	0	5.25	26.25	37.9 1	37.91
Remission %	0	0.00	12.00	25.9 7	48.82
Eular Good Response %	0	2.00	32.25	60.9 0	84.36
Eular Moderate Response %	0	85.5	67.25	38.5 1	15.64

### Conclusions

Each RTX course led to an increased and cumulative clinical OAS28 response compared to the previous one. With each following RTX course all patients registered consolidation of lower OAS28 response, and continuously growing LOA or remission percentage. Response was sustained and cumulated regardless their rheumatoid factor status. Introducing Rituximab to patients with no response or intolerance to anti- TNF agents proved to be an adequate choice, therefore we consider its prescription after the first anti- TNF failure as a preferred option in terms of clinical response.

## A case series from northeast of Iran

**Mohammad Hassan Jokar**

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### **Introduction and Objectives:**

Temporal arteritis is a granulomatous vasculitis affecting medium to large-sized elastic arteries, with a predilection for the superficial temporal and ophthalmic arteries and to a lesser extent other extracranial branches of the carotid arteries. The aim of our study was to describe the demographic, clinical and laboratory profile of patients with temporal arteritis in northeast of Iran.

### **Materials and Methods:**

In a retrospective study we reviewed the records of all patients that satisfied the ACR 1990 criteria for diagnosis of temporal Arteritis. The study was done in clinic of rheumatology of Imam Reza Hospital, Mashhad, Iran. The clinical presentation, laboratory parameters and biopsy findings of the patients were analyzed.

**Results:** A total of 30 patients were diagnosed with temporal arteritis from 1997 to 2012. The male: female ratio was 1.1:1. The mean age of onset was  $63.97 \pm 10.48$  years (minimum 44 years, maximum 83 years). The most common manifestations included headache (96.7%), temporal artery tenderness (62.1%), jaw claudication (23.3%), polymyalgia rheumatica (40%), visual manifestations (36.7%), fever (20%), sore throat (6.9%), and tinnitus (3.3%). The erythrocyte sedimentation rate was elevated in all patients (mean: 88.43 mm/1<sup>th</sup> hour, maximum: 140 mm/1<sup>th</sup> hour, minimum: 43 mm/1<sup>th</sup> hour). Anemia (Hb<12g/dl) was found in 26% of patients. Biopsy was done in 21 patients, with 15 of them being positive. Of 14 patients with eye involvement, 11 patients had unilateral and 3 bilateral eye involvement. Visual loss was permanent in all of the affected patients. All patients responded to steroids well (Except for visual loss). There was not any mortality in our patients due to temporal arteritis.

**Discussion and Conclusion:** Temporal Arteritis is about three times more common in females among the Caucasians, but in northeast of Iran it seems to have minimal gender preference. Temporal arteritis mostly affects the elderly population, appearing almost exclusively in patients aged >50 years, with the mean age of onset around 75 years of age. In our study, the mean age of onset was slightly lower at 63.97 years (44-83). Headache was more common in our patients (96.7% versus around 70% in other studies). Irreversible visual loss was an important complication in our patients. The response to steroids was excellent in our study. Other features of our patients were similar to that of the West.



## Therapeutic Effects of Low Level Laser Therapy versus Injection of Methyl Prednisolone in Plantar Fasciitis Patients Referring to Rheumatology Clinic

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3- Trauma research center. Kashan University of medical sciences, Kashan, I.R. Iran

### Background:

Plantar fasciitis is the cause of 11-15 % of the foot pain in adults. Diagnosis is done clinically based on patient history and sensitivity in touching the foot. We try to compare the therapeutic effects of low level laser therapy with that of injection of Methyl Prednisolone in Plantar Fasciitis patients referring to the rheumatologic clinic of Kashan.

### Material and methods:

40 plantar fasciitis patients referring to the rheumatology clinic were randomly divided into 2 groups. The first group included 20 patients receiving 40 mg of Prednisolone were injected locally while the second group underwent 10 sessions of LLLT. Level of pain and morning stiffness 1 and 6 weeks after treatment were measured and the data gained were then analyzed with SPSS software using statistical tests of repeated measurement, Man-Whitney, Chi-Square, Fisher's exact, and generalized estimating equation.

### Results:

Reduced morning stiffness in the laser therapy group one week ( $p=0.004$ ) and six weeks ( $p=0.016$ ) after the treatment was significant, while in the group receiving Methyl Prednisolone no difference was detected ( $p=0.125$  and  $p=0.375$ , respectively). Walking-induced pain and tenderness in the foot showed a meaningful decrease one and six weeks after the treatment in the laser therapy group ( $p<0.001$ ), while in the Methyl Prednisolone group the increase was respectively  $p<0.001$  and  $p=0.002$  one and six weeks after the treatment and in the case of tenderness and walking-induced pain, the increase was as  $p=0.021$ . Comparison of the above-mentioned symptoms in the two groups within 1-10 weeks after the treatment demonstrate the same effect on the symptoms ( $P>0.05$ ). Based on VAS, rate of foot pain along with pain duration in the first and sixth weeks in the laser group showed a significant decrease ( $P=0.001$ ) comparing that before the treatment. The same result was obtained for the Methyl Prednisolone group. Comparison between the two methods revealed the same effect on the symptoms mentioned as well ( $P>0.05$ ).

**Conclusion:**

The results showed that low-level laser therapy has to a great extent the same effect as locally injected steroids in the treatment of plantar fasciitis. Thus, it can be a good substitution for local injection due to its non-invasive nature.

**Key words:**

Plantar Fasciitis, corticosteroids, low level laser therapy

## MicroRNAs signature in dermal fibroblasts of systemic sclerosis associated with TGF- $\beta$ signaling pathway

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### Introduction and objectives:

Systemic sclerosis (SSc) is a chronic disorder which typically results in fibrosis of the skin and internal organs. Dermal fibroblasts of SSc patients produce excess amounts of collagen progressively and are resistant to elimination by apoptosis. Transforming growth factor  $\beta$ 1 (TGF- $\beta$ 1) is a cytokine that has a key role in the pathogenesis of SSc. It has been shown that many of the characteristics of SSc fibroblasts resemble to healthy fibroblasts that stimulated by TGF- $\beta$ 1. MicroRNAs (miRNAs) are small, 21-25 nucleotides, non-coding RNAs that negatively regulate gene expression at post-transcriptional level. It has been shown that microRNAs target most members of the TGF- $\beta$ 1 pathway. The objective of this study is to investigate the potential link between microRNAs and regulation of fibrotic genes related to TGF- $\beta$ 1 pathway.

### Material and methods:

Human dermal fibroblasts were obtained by skin biopsy from forearms of 10 patients and 10 controls. Total RNA including microRNAs was extracted from fibroblasts using miRNeasy Mini Kit (Qiagen). MicroRNA quantification and differential expression was carried out using SYBR Green-based real-time PCR.

### Results:

14 microRNAs that target fibrotic genes in TGF- $\beta$ 1 pathway were selected from TargetScan and miRecords online target prediction resource. Analyzing Real-time PCR data by comparative CT method revealed that only miR-29b and miR-21 expression changed significantly between SSc and controls. MicroRNA-29a expression decreased and miR-21 expression increased in SSc fibroblasts.

### Discussion and conclusion:

Excess collagen is one of the hallmarks of skin fibrosis. It has been shown that collagen is one of the direct targets of miR-29b. It seems that induction of miR-29 overexpression by miR-29 mimics would decrease the expression of collagen. In addition, miR-21 directly targets Bax and Bcl2 mRNAs which are apoptosis-related proteins in SSc myofibroblasts. Inhibition of miR-21 may induce apoptosis of myofibroblasts through increasing the Bax/Bcl2 ratio. Collectively, our findings suggest that miR-29b and miR-21 may modulate abnormal regulation of apoptosis and collagen secretion.

### Keywords:

Systemic sclerosis, microRNA, Fibrosis, TGF- $\beta$

## The efficacy of Strontium ranelate on knee osteoarthritis versus placebo: randomized double blind controlled clinical trial

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### Introduction and objectives:

Osteoarthritis is the most common form of arthritis and is associated with disability. In Iran osteoarthritis is even more common. The aim of this study was to assess the efficacy of strontium ranelate versus placebo on clinical improvement of knee osteoarthritis.

### Material and methods:

A 12-weeks randomized double blind controlled clinical trial includes ambulatory 82 patients with symptomatic primary knee osteoarthritis in I-III grade Kellgren – Lawrence .Patients were randomly allocated to two groups (strontium 2g/day or placebo).We excluded ones who had history of DVT, usage of glucosamine & grade IV Kellgren –Lawrence. At first visit patient's symptoms were assessed with WOMAC score & VAS. At the end of study the patients were reevaluated with the same scales. Data analysis was done with SPSS.

### Results:

The results of the study indicate significant differences in pain, stiffness, function & total WOMAC, VAS mean scores between the two groups: strontium ranelate with dose 2gr/day & placebo. (p-values :< 0/0001)

### Discussion and conclusion:

Regarding the positive effects of Strontium ranelate on lowering the symptoms& improvement of pain & function strontium ranelate (2g/day)is recommended as effective ways to be taken for the treatment of patients with knee osteoarthritis. More researches are needed for widespread recommendations.

## Evaluation of the effect of green tea extracts in patients with mild to moderate knee osteoarthritis

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### Introduction and objectives:

Osteoarthritis (OA) is a progressive, degenerative joint disease that has a major impact on joint function and quality of life. Green tea has been being used in traditional medicine and there are some evidences that this herb, especially one of its derivatives, epigallocatechin 3-gallate (EGCG), may have a role in inflammation and joint destruction. As there is no clinical study regarding the effects of either green tea or EGCG on OA, in this study we assumed to review its clinical effects in patients suffering OA.

### Material and methods:

Forty patients were enrolled into this randomized clinical trial. They were divided into two groups, cases and controls. At the beginning of the study, WOMAC questionnaire were completed for each patient. Then, cases received 1500 mg/day of green tea leaves plus 100 mg/day Diclofenac, while the controls consumed only 100 mg/day Diclofenac. After one month, they were evaluated again, using the WOMAC questionnaire.

### Results:

At initial assessment, and at the end of the study, there were no differences among studied variables between the two groups. Although following the consumption of green tea, pain of the cases decreased and their capability to perform their physical activity increased and total score of WOMAC questionnaire improved. But, except pain, there were no considerable improvement in controls.

### Discussion and conclusion:

Although our study is suggestive that green tea may have some beneficial effects in patients with OA, it is not obvious that is it a true consequence or just some placebo effects. Further studies may be required to lighten up the way we have started.

### Key word:

Osteoarthritis, Green tea, Epigallocatechin 3-gallate

## **Efficacy of interferon $\alpha$ (IFN $\alpha$ ) therapy on ocular and nonocular manifestations of Behcet's disease: A case series of 11 patients in East Azerbaijan**

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### **Introduction and objectives:**

Behcet's disease is a multisystem vasculitis manifesting mainly with oral ulcers, genital ulcers, uveitis, and skin lesions. One of the most frequent and important complications of Behcet's disease is ocular involvement, mostly posterior uveitis with retinal vasculitis, leads to blindness in 20-50% of the involved eyes. Standard treatment includes steroid and immunosuppressor agents. In a cross sectional study we evaluated the efficacy of interferon  $\alpha$  (IFN $\alpha$ ) therapy in control of symptoms of Behcet's disease that were refractory to standard treatment.

### **Material and methods:**

This study included 11 patients with resistant symptoms (8 with ocular involvement, 2 with oral aphthous ulcer and 1 with cellulitis). Data from these cases were reviewed retrospectively. Interferon  $\alpha$  was administered at a low dose method (6 million unit daily and after control of symptoms 6 million unit every other day as subcutaneous injection). Efficacy was judged by improvement in the visual acuity and Iranian's Behcet's Disease Dynamic Activity Measure.

### **Results:**

In 8 patients with ocular involvement, remission was obtained in 6 of cases. Visual acuity improved in 6 patients. Mean Iranian's Behcet's Disease Dynamic Activity Measure score fell from 13.5 to 5.875. Interferon  $\alpha$  was discontinued in 4 patients with ocular involvement. Two of patients had shown remission of macular edema. Non ocular Behcet's disease manifestations did not respond to interferon  $\alpha$  therapy.

### **Discussion and conclusion:**

In open studies and case series, interferon  $\alpha$  has been shown to be very effective for treating severe ocular Behcet's disease. Our findings indicate that interferon  $\alpha$  leads to notable improvement in vision in cases of ocular involvement refractory to steroid and immunosuppressive drugs, but low dose interferon  $\alpha$  didn't have beneficial effects on cellulitis and oral ulcers.

## Less frequent monitoring of liver transaminases level in rheumatic patients treated with low dose methotrexate. Is it safe?

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### Introduction and objectives

Methotrexate (Mtx) is the most popular disease modifying anti rheumatic drug. American College of Rheumatology (ACR) recommend measuring aspartate aminotransferase (AST) and alanine aminotransferase (ALT) every 4–8 weeks for monitoring the development of hepatotoxicity related to Mtx. But in 2003 Yazicishowed that 22% of rheumatologists in USA monitor liver enzymes less frequently and 41% of them believe that the liver function monitoring guidelines need to be changed. The aim of our study was the considering the safety of monitoring liver enzymes every 12 weeks.

### Material and methods

In this retrospective study data from rheumatic patients receiving Mtx in the subspecialty clinics of Tabriz University of Medical Sciences were analyzed. According to this center discipline in patients who receive Mtx ALT and AST measured every 12 weeks. Patients according the ALT and AST level were classified: no change, 1-2 time increase, 2-3 time increase, more than 3 time increase in ALT or AST level. After that according the physician decision patients were classified as no change in Mtx dose, decrease in Mtx dose, discontinuation of Mtx.

### Results

The 809 patients with inflammatory connective tissue disorders included into the study had a mean disease duration of 61.75 years. Mean follow up duration and mean Mtx use duration were respectively 31.22 and 19.76 months. Mean accumulation dose of Mtx was 865.85 mg. In the follow-up period in 11.6% of patients transaminases increased but only in 0.5% of the patients Mtx discontinued for liver complications. In all of the patients transaminases reached to normal level after discontinuation of Mtx and no case of hepatic insufficiency, cirrhosis and death for liver complications was seen.

### Discussion and Conclusion

Sever hepatotoxicity may develop in a low percentage of patients who are treated with Mtx and a laboratory monitoring regimen for Mtx treated patients that is less intensive than that suggested by the ACR is desirable.

## Evaluation of safety, tolerability, efficacy and post-cessation efficacy durability of tocilizumab in patients with active rheumatoid arthritis

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### Objective:

To evaluate safety, tolerability, efficacy and post-cessation efficacy durability of tocilizumab (TCZ) in an open-label, post-approval pilot study among some Iranian patients with moderate to severe rheumatoid arthritis and inadequate response to disease-modifying antirheumatic drugs (DMARDs) in a routine clinical practice setting

### Methods:

Twenty four weeks monitoring of adverse events, treatment discontinuations, and efficacy of TCZ (8 mg/kg every 4 weeks for a total of 6 doses), while continuing previously used DMARD(s) and oral steroid, as well as investigating durability of TCZ effects in follow up visits within a year after the drug cessation. The efficacy end-points included 28-joint disease activity score (DAS28) and an annual change in radiographic Sharp-van der Heijde score (SHS).

### Results:

Of the 21 treated patients, no one withdrew from the study due to adverse events (AE) or unsatisfactory responses. The most common drug-related AEs were dermatologic and the most common serious AEs were infectious in origin (all of the latter occurring after the last drug dose). The only case of TCZ dose alteration occurred due to increased liver transaminase levels. Changes in lipid and hemoglobin levels, as well as neutrophil and platelet counts, were within the expected ranges. At week 24, 71.4% of patients achieved DAS28 remission, while cumulative frequencies for significant clinical response and low disease activity during the same period were 100% and 90.5%, respectively. The mean SHS in both hands showed no significant change a year after the first TCZ administration. Mean DAS28 levels gradually increased through one year post-cessation follow-up visits, with a somewhat slower rate compared to initial mean DAS28 reduction.

### Conclusion:

In our DMARD-resistant patients with active rheumatoid arthritis, TCZ + DMARD provided an expectedly rapid and a relatively not sustainable post-cessation efficacy, as well as preventing structural joint damage, but with some unexpected safety concerns.



## Effects of phylloquinone (vitamin K<sub>1</sub>) supplementation on disease activity score in patients with rheumatoid arthritis

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### Introduction and objectives:

Rheumatoid arthritis (RA) is an inflammatory disease. Control of inflammation leads to remission in RA. It has been proved that dietary factors are very important in mitigating inflammation and symptoms of the disease including numbers of swollen and tender joints. Among these dietary factors, vitamin K which has been a very interesting subject recently, has been reported as an anti-inflammatory agents in some latest published papers. Hence, we aimed to evaluate the effects of phylloquinone on disease activity score in RA patients.

### Material and methods:

In present double-blind clinical trial, 58 women with definitive rheumatoid arthritis, who fulfilled the eligibility criteria, were participated in the study. Being pregnant, lactate or post-menopause, using dietary supplements during past 6 months and having other disorders were excluded from the study. Then, patients were allocated in two groups randomly. One group received vitamin K<sub>1</sub> tablet [10 mg/day] (n=30), and the placebo group (n=28) took a similar tablet without any pharmacological effect for eight weeks. Demographic information was obtained through face to face interview. And, DAS-28 which is a standard quantitative measure of disease activity in rheumatoid arthritis was assayed by rheumatology specialist at baseline and at the end of intervention.

### Results:

70.7% of patients were classified in remission, 19% in mild, 8.6% in moderate and 1.7% in severe groups. DAS28 wasn't significantly different between two groups at baseline ( $P_{\text{value}} > 0.05$ ). However, after the intervention a significant reduction (2.07%) in DAS28 was observed in vitamin K group ( $P_{\text{value}} = 0.041$ ).

### Discussion and conclusion:

Vitamin K<sub>1</sub> decreased DAS28 significantly. This finding revealed that vitamin K supplementation in combination with other disease-modifying anti rheumatic drugs might be an effective promising factor in relieving RA symptoms. It seems more investigations in this field are needed.

### Key words:

Rheumatoid Arthritis, vitamin K<sub>1</sub>, phylloquinone, Disease Activity Score

## Molecular assay on Staphylococcal enterotoxin C gene in Synovial Fluid patients with Rheumatoid Arthritis

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### Introduction and objectives:

In our previous study using a commercial ELISA kit, the existences of Staphylococcal enterotoxin C in synovial fluid of patients with rheumatoid arthritis have been shown. This finding has raised a number of important questions. So, the aim of this study was design molecular methods to detect Staphylococcal enterotoxin C gens in synovial fluid of patients with rheumatoid arthritis.

### Materials and Methods:

In this study, Staphylococcus aureus strain producing enterotoxin C was as reference strain. PCR was set up by use of three pair primers. Then, in addition of bacterial culture, fifty synovial fluids of patients with rheumatoid arthritis were subjected to DNA extraction and PCR amplification was carried out. All samples were examined by ELISA method for enterotoxin C. The data were descriptively analyzed.

### Results:

However, the results of bacterial culture were negative for all samples. PCR results showed that 22% of samples contained enterotoxin type C gene. Furthermore, as the same equal of samples (22%) were shown to be positive for enterotoxin C by Elisa.

### Discussion and conclusion:

Based on findings of this study, Staphylococcus aureus enterotoxin C has been detected in clinical samples by use of PCR method and ELISA test. However, the involvement Staphylococcal Ent C in the occurrence of disease is observed. The main challenge is that due to Staphylococcus aureus strains can produce more than 20 different types of enterotoxins. This is also necessary investigated the other enterotoxins.

### Key words:

Enterotoxin type C, PCR, ELISA, Staphylococcus aureus, rheumatoid arthritis

مقالات پذیرفته شده به عنوان

**پوستر**

**Poster Presentation**

## Reliability, Validity, and Responsiveness of the Persian-version of the Rheumatoid and Arthritis Outcome Score (RAOS) in Patients with Rheumatoid Arthritis

Hossein Negahban, Fatemeh Masoudpur, Elham Rajaei, Mohammad Ali Nazarinia, Masood Mazaheri, Mahvar Salavati

### Objective:

The aims of this study were to cross-culturally translate the original Rheumatoid and Arthritis Outcome Score (RAOS) into Persian and evaluate its reliability, validity, and responsiveness in a group of patients with Rheumatoid Arthritis (RA).

### Methods:

The Persian RAOS was obtained after a standard forward-backward translation. A sample of 103 patients was asked to complete the Persian RAOS, Short Form-36 (SF-36), and the Arthritis Impact Measurement Scale-Short Form (AIMS2-SF). To determine test-retest reliability, the Persian RAOS was re-administered to a sample of 50 patients, 3-6 days after the first visit. To evaluate responsiveness 50 patients completed the Persian RAOS, SF-36, and AIMS2-SF at baseline and at the end of pharmacological intervention. Test-retest reliability and internal consistency were assessed using intra-class correlation coefficient (ICC) and Cronbach's alpha, respectively. Construct validity was assessed by comparing the results of the RAOS with the Persian SF-36 and AIMS2-SF using Spearman's correlation coefficient. Responsiveness was assessed by the calculation of effect size (ES) and standardized response means (SRM).

### Results:

The acceptable level of  $ICC > 0.70$  and Cronbach's  $\alpha > 0.70$  were obtained for the most RAOS subscales. As expected, moderate to strong correlations were seen between subscales of the RAOS and the SF-36 / AIMS2-SF intended to measure similar constructs. The ES range of 0.18 to 0.51 and the SRM range of 0.25 to 0.91 were obtained for the RAOS subscales.

### Conclusion:

The Persian RAOS is a reliable, valid, and responsive outcome measure for patients with RA suffering from arthritis in the lower limb joints.

## Evaluation of the bone mineral density in iranian systemic sclerosis patients and correlation with serum 25 hydroxy vitamin D3 level, comparing to normal control population.

Mohammadali Nazarinia, Maryam Alavi  
Shiraz University of Medical Sciences

### Introduction

the aim of our study was evaluation of the bone mineral density in systemic sclerosis(SSc)patients.we attempted to eliminate interfering factors by choosing new cases.also we aimed to determine 25-hydroxy vitamin D3 level in SSc patients and its association with bone mineral density.

### Material and Methods:

28 new cases of SSc and 28 age and sex matched controls,were studied.we assessed familial history of osteoporosis and/or fracture,personal fracture history and menopausal status for women,the presence or absence of an exercise activity for matched group.Bone mass density was measured by dual energy-x-ray absorptiometry at spine and femur, and Laboratory parameters of bone metabolism measured in both groups,including:serum calcium,phosphate, alkaline phosphatase,25-Hydroxy vitamin D3 level .

### Results:

The mean age of cases was  $47.62 \pm 1.67$  yrs versus  $47.38 \pm 1.40$  yrs in controls. Phosphocalcic metabolism parameters were within normal ranges in both groups.the mean symptom duration was  $11.27 \pm 8$  month.Bone density of femur in cases was  $0.717 \pm 0.138$  g/cm<sup>2</sup> versus  $0.759 \pm 0.127$  g/cm<sup>2</sup> in controls.bone density of lumbare in cases was  $0.879 \pm 0.144$  g/cm<sup>2</sup> versus  $0.950 \pm 0.150$  g/cm<sup>2</sup> in controls so bone density in new cases of SSc was lower than controls but was not significant( $p=0.17$ ),unless bone density in menopausal cases is significantly lower than menopausal controls( $p<0.05$ ).The correlation between vitamin D & bone density was not significant,there was significant correlation between vitamin D deficiency and SSC,especially sever vitamin D deficiency(  $p<0.001$ ).58% of cases versus 10% of controls had vitamin D deficiency.25%of cases versus 0%of cases had insufficient vitamin D.

### Discussion and Conclusion:

According to our study,we discusse that selection new cases,shorter lag time in diagnosis, absence of interfering factors like malabsorption,early menopause,use of corticosteroid, decreased physical activity and chronic inflammation,can cause different conclusions between our study and previous studies.Lower bone mass density

in patients (but not significant) especially in menopausal patients show the weak correlation between SSc and bone density, but with progression of disease & adding other factors, this correlation will be stronger. correlation between vitamin D and systemic sclerosis expressed that an important role for vitamin D as an environmental factor for systemic sclerosis.

## A 6-year-old child neuropathy due to Churg Strauss syndrome: A case Report

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Churg Strauss syndrome (CSS) is a granulomatous necrotizing small vessel vasculitis which is rare in childhood. It can be diagnosed if 4 criteria of seven clinicolaboratory criteria of American College of Rheumatology (ACR) are present. They include previous history of Asthma, eosinophilia, previous history of respiratory or gastrointestinal allergy, mononeuropathy or polyneuropathy, pulmonary infiltration, paranasal sinuses involvement and extravascular eosinophilia in organ biopsy. Our case was a 6-year-old boy with drop hand due to brachial plexus neuropathy for 2 weeks. He had several previous hospitalization due to childhood asthma and also had a positive history of allergy to cow's milk protein in infancy. Peripheral blood eosinophilia was also positive in past laboratory exams. He was suffering from rectal bleeding several times last year and rectal biopsy revealed granuloma with eosinophilia. Bronchoalveolar lavage (BAL) was performed for him, it was negative for fungal and tuberculous infection and there was no evidence of granuloma or eosinophilia.

According to five positive criteria including neuropathy, eosinophilia, previous history of asthma, positive history of allergy and positive rectal biopsy, he was diagnosed as CSS and treated with corticosteroids, cyclophosphamide pulse therapy and IVIG. After 4 months follow up, peripheral neuropathy improved.

**Keywords:**

Churg Strauss syndrome, Neuropathy, Granulomatous vasculitis

## Vitamin k2 level in healthy bone and osteoporotic patient in Qazvin

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### Introduction and objectives:

It is rare to have a vitamin K deficiency. That's because in addition to being found in leafy green foods, the bacteria in our intestines can make vitamin K. Accumulating evidence supports an active role for vitamin K2 in bone health and osteoporosis.

### Material and methods:

In This case-control study, We measured the serum levels of vitamin K2 in a group of 50 patient with osteoporosis and 48 persons with normal densitometry a mean age of 59 years in osteoporotic patient and mean age 50 years in healthy persons that randomly chosen from the client to BooAli hospital in Qazvin city. Regarding to lack of normal distribution of data, mann-Whitney test was used for analyze.

### Results:

Serum vitamin K2 levels were found 75.9 in osteoporotic patient and 71.3 in controls there was no significant difference between two groups.(Mann-whitney test :pvalue=0.709).

### Discussion and conclusion:

Have vit K2 supplement magical powers? There is different investigation about effect of vitamin k2 on osteoporosis.thus with attention to this study that it is "premature" to recommend vitamin k2 to all of osteoporosis patients and Because of the potential for side effects and interactions with medications. Therefore, further studies are needed to detect level of vitamin K2 in all of osteoporosis patient. Before treat with vit.k2.



## Determination of specificity and sensitivity of Anti-RA-33 in diagnosis of early RA

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### Introduction

Rheumatoid Arthritis is a chronic inflammatory disease with symmetric polyarthritis in peripheral joints with its etiology is unclear.

Diagnosis of RA is based on clinical findings and serologic tests (ACR, EVLAR criteria) rarely in early disease, diagnosis could be difficult.

Anti -RA33 is an Auto-Antibody against RA33, 36KDa protein, called HN RNPA<sub>2</sub> is accompanied with mRNA.

### Material and methods

In this study, Anti-RA33 was measured in patients with RA, a case-control trial was done at Qazvin medical science university in 1391.

Study took a look at two groups consistent of patients and healthy control group.

The number of patients who were visited in Rheumatology Clinic was 43 that their disease had been diagnosed by a Rheumatologist.

Healthy control group were 55 persons who were choose from other clinic, patients without any joint disease in the same age and sex with group matching.

Out of 98 studied-people, there were 21 persons male and 77 were females.

In studied-groups, clinical findings were registered in questionnaire and Anti-RA33 and RF titer were measured in blood sample by a reference laboratory.

In RF and Anti-RA33 titer were a position significant correlation in patient-group ( $p=0.015$ )

A remarkable difference could be see between two groups in titer of RF and Anti -RA33 test had 98% sensitivity and 20% specificity, PPV was 55% and NPV was 90%.

### Conclusion

Anti -RA33 could have diagnostic and prognostic value, just regard to NVP 90% that would determine patients from healthy persons with negative serologic tests.

Anti -RA33 particularly would be used in distinguished RA with other small joint disorders in early disease.

### Key Words:

RA; Rheumatoid Arthritis, RF; Rheumatoid Factor, PPV, Positive Predictive Value, NPV, Negative Predictive Value.

## Granulomatous mastitis , Ignored syndrome?

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### Introduction:

Granulomatous inflammatory lesions of the breast can be a rare secondary complication of a great variety of other conditions such as tuberculosis and other infections, sarcoidosis and Wegener's granulomatosis.

Idiopathic granulomatous mastitis first described by Kessler and Wolloch in 1972. Idiopathic granulomatous mastitis is defined as granulomatous mastitis without any other attributable cause such as the above mentioned.

Patients mostly present with a hard lump in one breast without any sign of a systemic disease. Other symptoms include nipple retraction, pain, inflammation of the overlying skin, nipple discharge, fistula, enlarged lymph nodes. Other associated symptoms include fever, poly arthralgia and erythema nodosum.

Correlation between Granulomatous mastitis with elevation level of serum prolactin, oral contraceptive pill consumption is reported.

### Material and methods:

The clinical history and course of eight cases of Granulomatous mastitis are presented (table 1)

**Table 1:**

	Age	Time since last lactation	Child Num.	Breast	Prolactin level	Lmph Nodes		Associated symptoms	Location	
						Enlarged	Painful		Urban	Rural
1	33	18 mo	2	L	Normal	-	-	Arthralgia	+	
2	36	6 mo	2	R	High	-	-	-	+	
3	26	2 yr	1	R	Normal	-	-	EN	+	
4	32	1 yr	2	L	Normal	-	-	Arthritis	+	
5	23	1 yr	1	R	Normal	-	-	Arthritis	+	
6	42	1 week	1	L	Normal	-	-	-	+	
7	39	11 yr	2	L	High	-	-	-		+
8	36	4 yr	2	L	Normal	+	-	-	+	

Histologically, non caseating granuloma and microabscess formation is reported.

After breast biopsy and confirmed diagnosis of granulomatous mastitis by pathologist, all patients visited by the infectious diseases specialist.

Chest-X-ray, PPD test and AFB staining of the all samples, and serologic tests of brucella have been performed.

When the all workup of infective causes of granulomatous diseases are completed, the patients are referred to rheumatologist.

In rheumatology clinic all patients are reevaluated and other causes of inflammation and granulomatous disease (Wegener's – Sarcoidosis) were ruled- out by laboratories tests including ACE-ANCA).

When idiopathic granulomatous mastitis has been confirmed by the rheumatologist, treatment will be started with corticosteroid.

#### **Results:**

In this case series we reported eight cases of idiopathic granulomatous mastitis during 18 months interval. We excluded one case of granulomatous mastitis that her serology for brucella was positive and another case, who was compatible for tuberculosis, and their treatment were completed successfully.

The first physical examination of all patients were similar. Involved breast had palpable lumps in extra areolar space. 37.5% of cases have had fistula formation but in follow-up(after treatment) they were developed scar tissue in fistular/surgical sites , with nipple retraction. But the size of palpable lymph nodes were decreased dramatically.

In our series 25% of patients had high serum prolactin level and 75% had high ESR and positive CRP. Correlation between presentation time and pregnancy / Lactation was obvious, but one case who had no pregnancy in recent years, has had high serum prolactin level.

One patient had axillary lymphadenopathy (2 small, mobile, tender lymph Node).

Pathologic view of their slides were relatively similar and sections show extensive destruction of lobules by Mixed inflammatory cells infiltration and collection of epithelioid histocytes and few giant cells that leading to some microabscess formation that are compatible with granulomatous mastitis.

After 2-3 weeks of corticosteroid administration, the breast lesions are relatively improved and acute phase reactants reduced near to normal.

#### **Conclusion:**

Idiopathic granulomatous mastitis is a rare granulomatous inflammatory disease of the breast tissue.

Pathogenesis of this disease is not completely defined.

We have been detected a series of patients surprisingly during recent 18 months in our clinic that comparative to past years has a high incidence.

It is important to consider idiopathic granulomatous mastitis as a forgotten inflammatory disease of breast and these patients must be searched carefully.

Infectious agents, toxins, Drugs, hormone , environmental factors can be the causative agents.

Diagnostic and therapeutic approach to this syndrome is mandatory.

## “Studying the Awareness Level on Osteoporosis in Nurses Working in Orthopaedic Wards”

Somayeh shabani, Mehran Solimanha

Orthopaedic Research Center, Guilan University of Medical Sciences

### **Introduction and Objective:**

Osteoporosis is called the silent disease of the century. It is known as an incurable disease. Prevention is the only way to fight it. Intervention programs are based on level of people's awareness.

This study was performed to determine the awareness level on osteoporosis in nurses working in orthopedic wards.

### **Materials and Methods:**

This was a cross-sectional study. Data collection tools included a researcher-made questionnaire consisting of personal and social information and awareness level on Osteoporosis in terms of risk factors, prevention methods, treatment, nutrition, and health. Samples included nurses working in orthopedic wards of Poursina Hospital in Rasht city and Imam-Khomeini, Akhtar and Shariati Hospitals in Tehran city who were selected by census method. After performing validity and reliability, data were analyzed by SPSS (version 16) using descriptive and inferential statistics.

### **Results:**

The average score of awareness was  $14.57 \pm 2.81$  (out of 20 scores). Level of awareness was average in participants. In studying the relationship between the awareness level of all mentioned factors of Osteoporosis and also obtained total score of awareness and demographic characteristics (age, gender, work history, education level), a significant relationship was found between age and level of awareness of treatment ( $P=0.020$ ), education and level of awareness of prevention ( $P=0.043$ ), risk factor ( $P=0.031$ ) and total awareness score ( $P=0.010$ ).

### **Discussion and Conclusion:**

Nurses are the greatest health human's resources. They should be more empowered scientifically. There is a need for specific and detailed programming to increase their knowledge.

### **Keywords:**

Nurses, Osteoporosis, Awareness level, Orthopaedic wards

## Quality of life in rheumatoid arthritis patients

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### Introduction:

Rheumatoid arthritis (RA) is one of the most common form of inflammatory arthritis affecting nearly one in 100 adults. Rheumatoid arthritis (RA) is a chronic disease, which has a detrimental effect on many areas of life, including physical, psychological and social functioning. The ultimate aim of any therapeutic intervention in patients with RA is to achieve a better overall quality of life (QoL). Although the importance of QoL is broadly acknowledged, there is no consensus about how it should be measured. This study concerns the use of the Rheumatoid Arthritis Quality of Life Questionnaire (RAQoL) in routine clinical practice to assess the specific quality of life needs of individual patients and to monitor the outcome of care for patient groups.

### Methods:

The Rheumatoid Arthritis Quality of Life (RAQoL) questionnaire was applied to two groups consisting of 40 patients with RA, one group with increasing difficulty in performing activities of daily living and one group with stable disease. The following data were recorded at baseline: sex, age, and disease duration, status of living (living alone or living with a partner) and level of education. The associations between the RAQoL and measures of utility, QoL, functional status and disease activity were evaluated. Factor analysis was carried out to investigate if one or more QoL dimensions could be distinguished within this questionnaire.

### Results:

Similar results regarding the association between the RAQoL and different sets of outcome measures were found in the two groups of patients. Regression analysis showed that about 75% of the variance of the RAQoL could be explained with variables of QoL, functional status and disease activity. Physical contact could be distinguished as a separate dimension within the RAQoL, in addition to the dimensions mobility/energy, self-care and mood/emotion. In two groups, QoL situation were not as well as healthy people, but there is a significant relationship between QoL with severity of disease.

### Conclusion:

The RAQoL is a valid instrument for measuring QoL in different populations of patients with RA. Physical contact, a dimension that is not covered by other common instruments in RA, could be distinguished as a separate dimension within the questionnaire.

### Keywords:

Rheumatoid arthritis, quality of life, validation, outcome measurement

## Pain and depression in patients with rheumatoid arthritis

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### Introduction:

Most people with rheumatoid arthritis are faced with frequent or ongoing pain and depression for it. While a person not be able to avoid pain, he/she cannot take control of the situation like depression. We used a bio psychosocial model using physical disability, helplessness and passive coping to predict depression and pain in rheumatoid arthritis (RA). The bio psychosocial approach refers to the interaction between the physical, psychological and social factors in the experience of a disease such as rheumatoid arthritis (RA). It posits integrated action, reciprocal determinism and evolution where no single factor can provide a satisfactory explanation of the disease on its own. An effort to explore the interaction between physical, psychological and social factors is evident in numerous studies.

### Methods:

Clinical and psychological measures were collected from 84 RA patients at over a period of 2 months. Path analysis was used for a cross-sectional and longitudinal prediction of depression and pain. Informed consent was obtained from all participants.

### Results:

Overall, these results indicate low physical disability and moderate pain. Likewise, depression, helplessness and coping were found to be within a high range. The reliability estimates for the scales were assessed by computing the Cronbach coefficient and were found to be moderate to high. Helplessness and passive coping were found to be significant mediators of the relationship between the physical disability and future depression and pain. The predictive model could account for 34–82% of the variance of pain and 25–58% of the variance of depression. The predictive model could explain 21–34% of the variance of pain and 16–26% of the variance of depression.

### Conclusions:

These results suggest that physical disability, helplessness and passive coping have a significant relationship with the levels of pain and depression in RA patients. Pain is an indicator of the RA disease. However, it contains both physical and psychological elements. This may explain why the loss of valued activities is closely linked to depression.

These findings have significant implications for RA management. Intervention should focus on reducing passive coping and perhaps catastrophizing in particular, in order to manage depression in RA. The findings of this study also suggest that close attention needs to be given to the level of helplessness when targeting pain reduction.

### Keywords:

Biopsychosocial model, rheumatoid arthritis, depression, pain, Iran.

## Study of association between rheumatoid arthritis and depression in patients

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### Introduction:

Anxiety and depressive disorders occur in 20–25% of patients with rheumatoid arthritis. These psychological problems are likely, at least in part, to be the result of having chronic physical symptoms such as pain and disability. Thus by conservative estimates, depressive disorder is two to three times as common in patients with RA as in the general population. In common with other painful conditions, depression associated with RA is often considered to result from the experience of chronic pain. This systematic review and meta-analysis examined the association between rheumatoid arthritis and depression.

In addition, we investigated the extent to which sociodemographic characteristics, level of pain, and method of assessing depression might affect the degree of depression.

### Methods:

We studied 100 patients with RA. For evaluation of the patients, Beck depression scale was used. Bibliographies were searched to identify all studies comparing depression in patients with rheumatoid arthritis and control subjects using standardized assessments. Effect sizes (Pearson's  $r$ ) and probabilities were combined across studies. We examined the extent to which the association between rheumatoid arthritis and depression could be attributed to level of pain; sociodemographic different. The study was done to ensure adequate rates of depression and to ensure that the group was as homogeneous as possible with regard to the interactions of demographic variables, disease characteristics, and social stresses. Of 100 patients approached, 85 consented and completed the assessments (an 85% rate of response). Subjects consenting to take part in this study were representative of patients with rheumatoid arthritis attending the rheumatology clinic, being no different in terms of age or duration of rheumatoid arthritis.

### Results:

By using Beck standard questionnaire in patients with rheumatoid arthritis with depression in healthy control subjects were found. Effect sizes for depression were small to moderate ( $r=.13$ ,  $P<.001$ ). This effect was not reduced in studies controlling for socio-demographic characteristics ( $r=.15$ ,  $P<.001$ ).

### Conclusions:

Depression is more common in patients with rheumatoid arthritis than in healthy individuals. This difference is not due to sociodemographic differences between

groups. Variation in the methods of assessing depression partly accounts for the differences among studies examining the levels of depression in patients with rheumatoid arthritis. Help with the disability arising from rheumatoid arthritis and assistance with coping should benefit those who have adequate social support and do not have independent social stress.

Therefore, these patients should be managed using a multidisciplinary approach including psychiatric support. Psychological treatment (e.g., cognitive behavior therapy and/or antidepressants), together with social help. Recognition of these different groups should lead to more appropriate and specific treatment of depression in rheumatoid arthritis, which may improve pain and disability as well as depressed mood.

**Keywords:**

Depression, rheumatoid arthritis, Beck questionnaire, Iran



## Evaluation of serum and synovial fluid levels of adiponectin in rheumatoid arthritis and osteoarthritis

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### **Introduction and objectives:**

Adiponectin has been shown to act as anti-atherogenic, insulin-sensitizing and anti-inflammatory factor in metabolic diseases. Recently, a new hypothesis has been proposed about pro-inflammatory effects of adiponectin in inflammatory and autoimmune conditions such as rheumatoid arthritis (RA).

### **Material and methods:**

Serum and synovial fluid concentration of adiponectin measured by ELISA method in 33 RA and 26 OA patients while they were fasting. ESR, an inflammatory marker, ACPA (anti citrullinated protein antibody) and clinical disease activity of the RA group using DAS28 scoring system, all were measured.

### **Results:**

Serum adiponectin concentration in RA patients was significantly higher than OAs ( $p = 0.015$ ). Synovial fluid concentration, also, was higher in RA than OA patients ( $p < 0.001$ ). Serum adiponectin level positively correlated with disease duration in RA group ( $r = 0.42$ ,  $p = 0.01$ ), either synovial fluid adiponectin level was ( $r = 0.39$ ,  $p = 0.02$ ). Neither serum nor synovial fluid adiponectin concentration had correlation with ESR, BMI, ACPA and DAS28.

### **Discussion and conclusion :**

The increase in serum and synovial fluid adiponectin may be due to pro-inflammatory effects of this adipocytokine. Positive correlation with disease duration may corroborate this hypothesis.

### **Keywords:**

Adiponectin, Rheumatoid arthritis, Osteoarthritis

## Anti-MCV in Rheumatoid Arthritis compared with other Rheumatismal diseases

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### Introduction and Objectives:

Early diagnosis and treatment of Rheumatoid Arthritis (RA) in order to prevent erosive destruction of joints and to improved the quality of patients life is necessary . The goal of this study was to assess the presence of antibodies to mutated citrullinated vimentin (Anti-MCV) in patients with rheumatoid arthritis compared with other Rheumatismal diseases ( Lupus Erythmatus , Seronegative Spondiloarthritis arthritis and Behçet disease ) and to evaluate the diagnostic value of Anti-MCV test for rheumatoid arthritis.

### Material and Methods:

The study included 100 patients who fulfilled the ( ACR ) classification criteria for RA, and 100 patient with other rheumatismal diseases.serum Anti-MCV were measured in all patients and results were categorized with a cutoff value of 20.0 U/ml.Titer and diagnostic value of Anti-MCV were compared in RA patients with other rheumatismal disease.

### Results:

Comparing RA with other rheumatismal diseases revealed a higher positivity and titer for Anti-MCV in RA ( 72% / 236.23±2.319U/ml ) than for other diseases ( 10% / 28.75±0.432U/ml ).Of the 58 Seronegative Spondiloarthritis patient 6/89% were positive for Anti-MCV and 17/14% of 35 SLE patients were positive while none of 7 Behçet patients were positive for Anti-MCV test.

### Discussion and conclusion:

Measurement of Anti-MCV is useful for diagnosis of RA.

## Obstetrical Outcome Of Planned Pregnancies In systemic Lupus erythematosus (SLE):A Prospective Study On 36 Pregnancies

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### Introduction and objectives:

Most studies observed an increase of fetal and maternal risk, notably when pregnancy occurs in active SLE. Planned SLE pregnancies may result in live birth as well as better maternal outcome. We conducted a prospective study in order to analyze the course of maternal diseases and the outcome of planned pregnancy in patients with lupus.

### Material and methods:

During a period of 12 years we prospectively followed 36 pregnancies in 32 SLE patients. Management protocol included:

- (1) pregnancy was authorized if disease was inactive for at least 6 months.
- (2) monitoring of patients by medical and obstetrical examination, and laboratory tests carried out at least monthly.
- (3) low dose aspirin before attempting conception and throughout pregnancy was added in women with antiphospholipid antibodies.

### Results:

The mean age of patients was  $28 \pm 5.2$  years (range 19 to 42) and the mean previous duration of SLE was  $7.93 \pm 3.9$  years. Lupus flare was observed in 36.11% of the cases, of which 8.3% occurred in the post - partum period. Flares were moderate. The kidney and joint were the two organs in which flares happened most commonly.

Pregnancy ended in full - term delivery in 18 cases (48.65%), prematurity in 14 cases (37.83%), spontaneous abortion not related to lupus flare in 5 cases (13.51%), premature rupture of membranes in 2 cases (6.45%), intrauterine growth retardation in 5 cases (15.62%) and preeclampsia in 2 cases (6.45%). We reported that 7(21.87%) neonates had a birth weight lower than 2500 gr.

After exclusion of abortions, the live birth rate was 86%. Two children had cutaneous neonatal lupus. There were no cases of still birth as well as congenital malformation.

### Discussion and conclusion:

We concluded that in planned pregnancy the live birth increased notably, however, prematurity of the neonatal remains high. Pregnancy in SLE should not be considered as an unacceptable high - risk situation if patients are controlled according to multidisciplinary plan.

### Key words:

Systemic Lupus Erythematosus, Pregnancy, Flare, Prematurity

## Association of HLA-A-BW4 with Susceptibility to SLE in Iranian Population

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### Introduction and objectives:

Systemic lupus erythematosus is a chronic inflammatory autoimmune disease that affecting multiple organs. Natural killer cells are innate immune lymphocytes that play the critical role in the pathogenesis of autoimmune disorders. The killer-cell immunoglobulin-like receptors (KIRs) are the family of cell-surface receptors, which recognize human leukocyte antigen (HLA) class I molecules, control NK cell responses.

### Material and methods:

The Study included 230 age and sex matched patients who recruited from Rheumatology Research Center according to ACR criteria. Also 273 healthy controls selected for this study. We performed HLA-A-BW4 and KIR3DS1 typing by PCR-SSP method. Chi-square values and odds ratios were measured to analyze the association between HLA-A-BW4 or KIR3DS1 and hematological disorders.

### Results:

Our Results show the frequency of HLA-A-BW4 gene was significantly decreased in SLE patients compared with healthy controls ( $P=0.009$ ; OR =2.219; 95% CI = 2.014 – 2.445). In contrast, KIR3DS1 gene was not associated with SLE. Female Patients positive for both KIR3DS1 and HLA-A-BW4 genes were more likely to show hematological disorders ( $P=0.034$ ; OR =2.079; 95% CI = 1.060 – 4.075).

### Discussion and conclusion:

In conclusion, HLA-A-BW4 is associated with SLE susceptibility in the Iranian Population. These results imply that an increase in activating KIR3DS1-HLA ligand pairs associated with an additional risk to develop hematological disorders among women patients and suggest that KIRs and HLA ligands' interaction may contribute to the pathogenesis of SLE.

## The effect of conditioning exercise on health status and pain in Patients with rheumatoid arthritis

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### Introduction:

Rheumatoid arthritis (RA) is a chronic, systemic, inflammatory, progressive disease, with joint synovitis as its main manifestation. Most people with RA tend to avoid physical activity due to their fear of overstraining themselves or pain exacerbations. Avoidance of activities may result in decreased muscle strength which can lead to further inactivity.

### Objective:

The purpose of this study was to evaluate the effects of conditioning exercise on health status and pain in patients with rheumatoid arthritis

### Materials and Methods:

In this randomized controlled trial sixty-four women diagnosed with RA (aging 23 to 63 years), who had no experience of attending any physical activity program during the six months prior to the study were examined. Participants were randomly assigned into two groups (case and control) 32 individual in each group. Patients in case group underwent 8-week conditioning exercise program while the control group did not receive any exercise program. Health status of patients was measured by AIMS2- SF questionnaire and visual linear scale was used to assess their pain. Health status and pain of all patients were evaluated before and after program.

### Results:

The results showed that a significant improvement occurs in health status scores at the end of intervention in the experimental group ( $P < 0.001$ ), but no such difference was observed in the control group ( $P > 0.05$ ) compared with the scores obtained before intervention. A significant reduction in pain levels was observed in the experimental group ( $P < 0.05$ ).

### Conclusion:

It can be concluded that conditioning exercise can reduce pain in patients with rheumatoid arthritis and improve their health status. Therefore it can be considered as an appropriate intervention for such patients.

### Keywords:

Rheumatoid arthritis, conditioning exercise, Pain, health status.

## Relationship of lifestyle factors to Bone Mineral Density in women attending Bone Densitometry Research Center in Shiraz IRAN

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### Background:

Osteoporosis is a serious problem worldwide, largely because of the consequences of the diagnosis. Nearly one million fractures occur annually in the United States, 250,000 of these are hip fractures. This number is expected to double by the year 2040. A 50 year-old woman today has a 16% risk for hip fracture in her lifetime. Nearly one half of those who experience a hip fracture die within one year and half of the remaining people require lifetime use of assistive devices to walk. The death risk for osteoporotic fracture is equal to the death risk for breast cancer. Many osteoporotic fractures can be prevented and treated. Healthy lifestyle choices can help prevent further bone loss and reduce the risk of fractures.

### Objective:

To determine the relationship of lifestyle factors to bone mineral density in women attending bone densitometry (BMD) center.

### Design and Method:

In this cross-sectional study, 1170 women aged 20-91 underwent bone mineral density measurement at bone densitometry center. Dual energy X-ray absorptiometry (DEXA) was performed at two sites (L2-L4) region of lumbar spine and neck region of femur. Based on the WHO definition the T-score value was considered for analysis. Accordingly, 404 (34.5%) subjects showed normal result, while 876(74.8%) subjects showed osteopenia, and 660 (56.4%) subjects showed osteoporosis. In addition to measurements of height, body weight (BMI) and the lifestyles of women, including physical activities, smoking habits, dietary dairy intake, calcium intake, subjects were interviewed about consumption pattern of dietary items, history of steroid intake and number of pregnancies in detail.

### Results:

Adjusted for age, the BMD significantly correlated to body weight for women. These results indicated the lower body weight to be a risk factor for the osteoporotic process in middle-age and aged women ( $p < 0.001$ ). The BMD shows a positive relationship to number of pregnancies (more than 4 pregnancies) in the femoral neck and lumbar spine ( $p < 0.000$ ). Physical activities were positively associated with BMD. This effect was stronger with hip BMD than with spine BMD. Weak positive associations were found between consumption of dairy products, smoking, steroid intake and BMD at the

two measurement sites. Low dietary calcium intake and low physical activity together with advancing years since menopause were independent risk factors for low BMD.

**Conclusion:**

Bone densitometry should be used to assess the severity of bone loss, identify those who need therapy and follow up and early diagnosis of those with osteopenia in order to institute proper therapy and avoid future osteoporosis. Such a study may help to identify risk factors of osteoporosis and provide evidence for future preventive strategies particularly it is important to reach young people while they are building bone mass (before age 30).

**Key words:**

Lifestyle, BMD, Women

## Determination of association of STAT4 rs7574865 with Susceptibility and clinical features of Rheumatoid Arthritis in Iranian Population

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### ABSTRACT

Rheumatoid Arthritis (RA) is a multifactorial autoimmune disease with complex genetic inheritance that affecting different organs and systems. STAT4 has been newly identified as a susceptible gene in the development of RA. According to recent studies, STAT4 has been associated with RA in various populations. We investigated whether STAT4 single nucleotide polymorphisms (SNPs) was not associated with susceptibility but related to clinical features of RA in Iranian patients.

The study group comprised 612 patients with RA and 389 sex-, age-, and ethnicity-matched healthy controls of Iranian ancestry. SNP rs7574865 was genotyped using the TaqMan MGB Allelic Discrimination method.

Our results showed that there wasn't any significant association between genotypes of polymorphism with the risk of RA in Iranian population. However, TT genotype compared to GG genotype in rs7574865 with ESR show significant association (P-Value=0.008).

We concluded that STAT4 alleles studied seems not to be susceptibility gene for RA in the Iranian patients. One of STAT4 SNPs (rs7574865) was associated with ESR. However, further studies are required to investigate the mechanism by which polymorphisms in this gene lead to RA.

### Key words:

Rheumatoid Arthritis; polymorphism; STAT4.



## Soy Milk Consumption, Markers of Inflammation and Oxidative Stress in Women with Rheumatoid Arthritis

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### Introduction and objectives:

Rheumatoid arthritis (RA) is a chronic autoimmune disease which resulted in destruction of bone and cartilage and often leading to progressive disability. Recent evidences have demonstrated that consumption of traditional soy foods containing isoflavones may protect against various chronic inflammatory diseases. Immune-modulatory isoflavones are considered because of their ability to bind to estrogen receptors. This study was designed to evaluate the effects of soy milk consumption compared with cow's milk on inflammatory markers among patients with RA.

### Material and methods:

Twenty five women (mean age= 45.72±2.36) with RA who enrolled in this randomized cross-over clinical trial, were randomly divided to consume a regular diet containing soy milk (200 cc per day) or a regular diet containing cow's milk (200 cc per day). Two 4-weeks dietary periods were separated by 2-weeks washout period. Markers of inflammation and oxidative stress were measured at baseline and 4 wk of each dietary period.

### Results:

Soy milk consumption compared with cow's milk resulted in a significant difference in percent changes regarding serum levels of hs-CRP (-13.81±5.39 vs. 9.21±6.33%;  $p<0.05$ ), TNF- $\alpha$  (-15.35±4.3 vs. 8.11±8.8%;  $p<0.05$ ) and Rheumatoid Factor (9.48±3.75 vs. 14.55±4.96%;  $p<0.001$ ). The results were not changed even after adjustment for weight. However, we have not seen any significant differences in IL-1 $\beta$ , IL-6 and malondialdehyde levels between two interventional periods.

### Discussion and conclusion:

Short-term soy milk consumption could decrease the serum levels of hs-CRP, TNF- $\alpha$  and RF in patients with RA. However, IL-1 $\beta$ , IL-6 and MDA levels did not change following soy milk intake in these patients. Further investigations with larger sample size and longer period of intervention are needed to confirm these effects.

## Efficacy of low dose and complete dose of glucosamine sulfate with chondroitin in knee osteoarthritis compared with placebo: A randomized double blind clinical trial

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### Introduction and objectives

Osteoarthritis is most common form of Arthritis and is associated with disability. In Iran osteoarthritis is even more common. The aim of this study was to assess the efficacy of glucosamine sulfate and chondroitin in complete dose and one – third recommended dose compared whit placebo.

### Method:

A 12-week randomized double blind clinical trial was done and 105 patients with symptomatic osteoarthritis in I-III stage Kellgren -Lawrence took part in study and were divided into 3 groups: completed dose of glucosamine(1500mg) and chondroitin(1200mg) - one – third recommended dose: glucosamine(500mg) and chondroitin(400mg) and placebo. The treatment period was followed by WOMAC and VAS. Data analysis was done with SPSS.

### Results:

.Patients with 20% or more reduction in total WOMAC score in group received completed dose of glucosamine sulfate and chondroitin were 60% ( $p=0.03$ )& in group received low dose were 66.7% ( $p=0.012$ )& placebo 32%.. VAS in group received completed dose was 60%( $0/06=p$ )& group received low dose was 55.6%( $p=0/15$ )& placebo 36%.

No difference was found between patients receiving completed dose and those who received low dose dose: pain ( $p=0.86$ ),stiffness ( $p=0.69$ ), function ( $p=0.81$ ), total WOMAC score ( $p=0.59$ ) and VAS ( $p=0.72$ ).

### Conclusion:

Both complete dose and low dose of glucosamine chondroitin sulfate are effective in treatment of knee osteoarthritis compared whit placebo and no difference was found between complete dose and low dose, then low dose is cost benefit.

## Cancer Presented with Vasculitis

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### Systemic disease can mimic vasculitis signs and symptoms.

A 34 year old men presented with secondary Raynaud's and paresthesia in both hands that started one month before admission. He reported 3 kg weight loss, arthralgia, amaurosisfugax but no skin lesion.

On early evaluation the lab data was normal but on brain MRI there were multiple white matter lesions in periventricular and subcortical areas.

Cyclophosphamide and Methylprednisolon pulses prescribed for the treatment of presumptive vasculitis. Cyclophosphamide was stopped after a reported mobile vegetation on tricuspid valve, exudative pleural effusion and diffuse nodules in both lungs.

Approximately 10 days after initiation of antibiotic therapy, he suddenly developed hemiplegia in right side, he also had severe back pain with tenderness and hematuria. Bilateral kidney infarction was found on CT scan of both kidneys.

Whole body bone scan was suspicious for rib and spine metastasis.

Examination of pleural effusion revealed malignant cells. Immunohistochemistry study of pleural malignant cells indicated to their possible GI tract, pancreas or lung origin. However, the exact source remained unknown despite thorough investigation. Patient started on chemotherapy for Adenocarcinoma of unknown of malignancy origin, most probably lung cancer. Now, His neurologic deficits were quite in remission and chemotherapy is continuing on.

Neoplastic disease should be considered as the underlying cause in the evaluation of every vasculitis patient.

### Key word:

Vasculitis, malignancy, Adenocarcinoma

## Chronic inflammatory poly neuropathy (CIDP) as a first presentation of systemic lupus erythematosus (SLE) / a case report

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Peripheral nervous system involvement frequently occurs in systemic lupus erythematosus (SLE) patients. However, chronic inflammatory poly neuropathy (CIDP) is an unusual presentation that can develop before, after, or simultaneously with the onset of SLE. We report a 20 year old man known case of diabetes mellitus with CIDP accompanying SLE. He has admitted to our hospital complaining progressive weakness of bilateral upper and lower extremities that began from 2 months ago. He was diagnosed with CIDP and treated with intravenous immunoglobulin (IV IG) with little improvement. Then plasma exchange was scheduled that was not helpful.

2 weeks later, he developed polyarthritis, oral ulcer and worsening of muscle weakness progressing to inability to walk.

On physical examination, polyarthritis of hand joints and oral ulcer were detected.

Neurologic examination showed 3/5 bilateral upper and lower extremity weakness, absent DTR and impaired position sense. The patient was diagnosed with SLE on account of pancytopenia, lymphopenia, pleuropericardial effusion, proteinuria, high titer ANA and Anti DSDNA.

Kidney biopsy revealed stage IV lupus nephritis. He received 3 pulses of methyl prednisolone, 6 monthly cyclophosphamide and high dose daily prednisolone. He had considerable improvement in proteinuria, regained the ability to ambulate with a normal gait after about 2.5 months.

Now after passing 1 year, he is asymptomatic, takes 5 mg prednisolone and 3 g cellcept. CIDP accompanying SLE may be resistant to conventional therapies including IVIG or plasma exchange, requiring immunosuppressive agents.

### Keywords:

Chronic inflammatory poly neuropathy, systemic lupus erythematosus, immunosuppressive agents, plasma exchange

## Bone mineral density in Iranian patients: effects of age, sex, and body mass index

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### Introduction and Objective:

Osteoporosis is a multifactorial skeletal disease that is characterized by reduced bone mineral density (BMD). BMD values depend on several factors such as age, sex and age at menopause. The purpose of this study was to determine the prevalence and changes in bone mineral density in Iranian patients.

### Material and Methods:

Three hundred patients were selected through random sampling technique in 2009. BMD was assessed by Norland (Excell) technique at the lumbar and femoral neck. Weight and height were measured through standard methods. A thorough history was taken from each patient. The data was analyzed using SPSS software version 13.0. P-values less than 0.05 were considered statistically significant.

### Results:

From among the 300 studied patients, 86.6% were female. their mean age was 52.7 years. Their average body mass index (BMI) was 28.14 kg/m<sup>2</sup>. Mean T-Score at lumbar spine and femoral neck was  $-1.07 \pm 1.19$  and  $-1.75 \pm 1.33$  respectively. Mean BMD value at lumbar spine and femoral neck was  $0.92 \pm 0.19$  and  $0.77 \pm 0.16$  respectively. The prevalence of osteoporosis at lumbar spine and femoral neck was 33.7% and 16.7, respectively. There was a significant correlation between age, BMI and BMD values ( $P\text{-Value} < 0.01$ ). Correlation between gender and BMD value at the lumbar spine and femoral neck was not significant.

### Discussion and Conclusion:

This study shows that ageing and low BMI are risk factors associated with bone loss. it is recommended to measure BMD and implement prevention programs for high-risk people.

### Key words:

Bone mineral density, body mass index, age, gender

## Bone mineral density status in rheumatoid arthritis patients during postmenopausal versus premenopausal stage

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### Background:

Women with rheumatoid arthritis (RA) are expected to be at additional risk of bone mineral density (BMD) loss during postmenopausal stage. To compare BMD status in postmenopausal RA (POST-RA) versus premenopausal RA (PRE-RA) as compared with age-matched controls.

### Methods:

BMD was measured at the femoral neck (FN) and lumbar spine (LS). Osteoporosis was diagnosed according to WHO criteria. The primary objective was to compare BMD reduction from control at FN and LS between POST-RA and PRE-RA patients. The secondary objective was to determine the risk of osteoporosis in each group of patients and its relationship with disease duration (DD).

### Results:

Ninety-one POST-RA with mean age of  $57.7 \pm 5.4$  years, median DD and menopausal duration (MD) and treatment duration (TD) of 7, 6 and 3 years respectively were compared with 67 PRE-RA with mean age; median DD and TD of  $38.4 \pm 6.7$ , 5 and 3 years respectively. Controls group consisted of 176 postmenopausal (median MD=7 years) and 72 premenopausal non-RA women with mean age of  $56.4 \pm 3.9$  and  $43.7 \pm 3.8$  years respectively ( $p=0.058$ ).

Compared with controls, mean FN-BMD  $\text{gr/cm}^2$  reduced by 16.3% in POST-RA versus 17.5% in PRE-RA ( $P=0.5$ ). Risk of FN-OP increased with OR= 5.1 (2.96-8.8,  $p=0.001$ ) in POST-RA vs 4.4 (1.4-14.43,  $p=0.012$ ) in PRE-RA. After adjustment for MD and DD the risk of FN-OP in POST-RA was 4.07 (95%CI, 1.8-9.2,  $p=0.001$ ) whereas in PRE-RA decreased to 1.47 (0.45-4.79). Each year of DD increased the risk of FN-OP in POST-RA by 2.6% (95%CI, -0.4-10) and PRE-RA by 8.8% (95% CI, 0.4-17.9%). LS-BMD in POST-RA vs greater than PRE-RA (9.4% vs 6.1%) but the risk of LS-OP did not differ between the two groups.

### Discussion and conclusion:

These findings indicate that POST-RA are at greater risk of FN-OP independent of DD and age whereas in PRE-RA it is significantly related to DD.

### Keywords.

Rheumatoid arthritis, postmenopausal, Bone mineral density, Osteoporosis, DD

## A preliminary study of HLA-DRB1 alleles in Khuzestani patients with rheumatoid arthritis

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### Introduction and objectives:

Rheumatoid arthritis (RA) is the most common chronic inflammatory disease with the worldwide distribution of approximately 1%. RA is a complex disease, believed to be caused by a combination of genetic and environmental factors. The HLA-DRB1 alleles play an important role in the genetic predisposition to RA. The main objective of this study was to compare the distribution of HLA-DRB1 (DRB1\*04, DRB1\*08 and DRB1\*11) among the Khuzestani RA patient population in the southwest of Iran.

### Material and methods:

The study subjects contained RA patients and healthy recruited from Golstan hospital in Ahvaz. The patients fulfilling American College of Rheumatology revised criteria 1987 were included in the investigation. We studied fifty RA patients and forty-six controls matched for age, sex and ethnicity. The genomic DNAs from the whole blood samples of patients with RA and normal individuals (control group) were extracted by salting out method. The HLA class II alleles were analyzed by the PCR-SSP technique. Comparison of HLA allele's frequencies between patients and control groups were made using chi-square test.

### Results:

Comparing the results between the patients and the controls suggests a slightly increase in the frequency of DRB1\*8 and DRB1\*11 alleles in the patient group. On the other hand, the incidence of HLA-DRB1\*04 alleles was the same as control.

### Discussion and conclusion:

Our results are somewhat surprising in comparison to other reports. This may be a reflection of the different ethnic groups of the patients. However, further study is suggested in order to conclude the close relationship between the presence of certain HLA-DRB1 alleles and susceptibility to RA in Khuzestani patients.

### Keywords:

PCR-SSP, Rheumatoid Arthritis, HLA-DRB1, Khuzestan province

## Prevalence of Joint Hypermobility in Children with Inguinal Hernia

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### Objective:

The aim of this study is to determine the relation between joint hypermobility syndrome (JHS) and unilateral and/or bilateral inguinal hernia in children.

### Methods:

A Case-control study has been conducted in which 67 children with inguinal hernia (unilateral and/or bilateral) accompanying 86 children (control group) with the age between 4 to 16 years were investigated. The joint hypermobility was assessed by searching in all of the possible joints according to Brighton scoring system. Student's t-test and Chi-squared test were used for the test of significance where applicable and  $P < 0.05$  was considered significant.

### Results:

The prevalence of joint hypermobility in children with inguinal hernia (unilateral and/or bilateral) was 80.6% (54 of 67). The 60 out of 67 patients (89%) had unilateral and 1 (10.4%) cases had bilateral hernia. The prevalence of joint hypermobility in the group with unilateral hernia was 80% (48 of 60) and in bilateral hernia was 14.3% (1 of 7). Comparison of the prevalence of disease between case and control groups indicated statistically significant difference ( $P < 0.001$ ) but it has not indicated significant difference between bilateral or unilateral inguinal hernia.

### Conclusion:

According to our research, there is a significant correlation between joint hypermobility and both unilateral and/or bilateral inguinal hernia.

### Keywords:

Inguinal hernia, joint hypermobility, hypermobility syndrome



## **Familial Mediterranean fever accompanied by polyarteritis nodosa: A case report**

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### **Objectives:**

Familial Mediterranean fever is the most common entity among the group of periodic fever syndromes. It is an autosomal recessive disorder characterized by acute, self-limited episodes of fever and polyserositis recurring at irregular intervals.

The aim of study: Vasculitis has been more and more reported in Familial Mediterranean Fever. Among them, the association of Familial Mediterranean Fever and polyarteritis nodosa has been well established. Clinical representation of polyarteritis nodosa in Familial Mediterranean Fever patients has certain characteristics and may be a feature of Familial Mediterranean Fever by itself.

### **Material & Methods:**

A 10 year-Old Iranian boy was referred to our department with history of recurrent abdominal pain followed by fever, chills, arthralgia and scrotal edema. He was suffered from urine discoloration, and gastrointestinal bleeding. His physical exam revealed fever (auxillary temperture: 38.7<sup>o</sup>C), hypertension (150/90mmHg), hepatomegally (liver span: 13cm), orchitis, subcutaneous painful nodules of both legs and arthritis of both shoulders and right ankle.

### **Results:**

His CT scan with contrast showed multiple hyperdense liesions in the liver (AVM). For more evaluation liver MRA was ordered which reported an abnormal enhanced area in the right liver lobe with significant neovascularisation.

The genetic study of MEFV gene mutation revealed homozygotic M694V mutation. According to his clinical manifestation and laboratory studies he was diagnosed as having FMF.

Conclusion: In endemic areas for FMF, physicians should consider the unusual presentation in any individual (under 20 years old) with multi organ involvement.

### **Keywords:**

Familial Mediterranean fever/ FMF/ polyarthritis nodosa/ PAN/ aneurysm

## Evaluation of the prevalence of joint laxity in children with attention Deficit / hyperactivity disorder

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### **Objective:**

The purpose of this study was to assess the prevalence of joint laxity in children with attention deficit hyperactivity disorder (ADHD).

### **Method:**

Eighty-six children, 28 girls and 58 boys, with attention deficit hyperactivity disorder were diagnosed at the child psychiatry outpatient clinic of the Mofid Children's Hospital, and 86 controls were assessed for joint laxity using Brighton criteria.

### **Result:**

Joint laxity was discovered in 74.4% of children with attention deficit hyperactivity disorder and in 12.8% of healthy controls.

### **Conclusion:**

The prevalence of benign joint hypermobility syndrome was high in children with attention deficit hyperactivity disorder, which shows a new basis for further studies.

### **Key words:**

Joint laxity, ADHD, Hypermobility syndrome, hyperactivity, attention deficit disorder

## Educational intervention for reducing the fear of falling and improving balance in the elderly: a single blind randomized controlled trial

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### Introduction:

Falling is a major health threat for the elderly and has a significant impact on their well-being and quality of life. Yet, falls are preventable among the elderly.

### Objective:

We sought to determine the effectiveness of an educational intervention in reducing the fear of falling and improving balance among the elderly visiting Jahandidegan center in Shiraz, Iran.

### Materials and Methods:

A preliminary study was conducted to determine the validity and reliability of the Modified Fall Efficacy Scale (MFES) for the Iranian elderly. Then, 40 individuals, 17 males and 23 females, between 60 and 74 years old were selected for the survey. The inclusion criteria were "MFES" score of less than 8 and Berg Balance Scale (BBS) score of less than 45. After completing the demographic questionnaire, MFES, and BBS, the participants were randomly allocated to the training or control groups. In the training group, each participant took part in one fall prevention class per week for 8 consecutive weeks. On the other hand, the control group received no interventions. BBS and MFES were completed immediately after the intervention. Finally, the data were analyzed using independent sample t-test and Chi-square test. Besides, P-value < 0.05 was considered as statistically significant.

### Results:

BBS and MFES mean difference (pre-post 8 weeks) were statistically significant change between groups (P < 0.001). The intervention reduced the fear of falling by 26.5% and improved balance by 4.3%.

### Conclusion:

The study results indicated that attending the training classes was effective in decreasing the fear of falling and improving the balance.

### Keywords:

Aged, Postural balance, Fear, Education, Accidental falls

## Effect of calcium-vitamin D and alendronate on serum Dickkopf-1 (Dkk-1) and Osteoprotegerin (OPG) in women with osteoporosis

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### Introduction and Objectives:

Early diagnosis and treatment of osteoporosis is one of the medical priorities which can prevent many complications. Several markers has been known as formation and reabsorption markers which is useful in the control of osteoporosis but none of them has a direct correlation with bone density.

### Material and Methods:

In a randomized controlled clinical trial, we studied 36 patients with osteoporosis and 36 healthy subjects who had the inclusion criteria in the form of two intervention and control groups (A and B groups, total 72 patients respectively) and the effect of osteoporosis standard treatment on serum levels of DKK-I and OPG was assessed. The results were analyzed for changes in serum markers before and after the treatment.

### Results:

The mean age for patients was  $60.2 \pm 6.8$  in the range of 40 to 68 years, Dkk-1 mean levels in patients with osteoporosis before the treatment was  $3.01 \pm 1.27$  ng/ml which had been changed to  $3.03 \pm 1.24$  ng/ml and had no significant difference ( $P=0.92$ ). The difference was significant in two groups before the treatment ( $P<0.0001$ ). Also OPG levels in patients with osteoporosis before the treatment was  $4.44 \pm 1.12$  ng/ml which had been changed to  $4.42 \pm 1.10$  ng/ml that had no significant difference ( $P=0.74$ ). Despite Dkk-1, there was not a statistically significant difference in serum OPG levels between two groups before the treatment ( $P=0.36$ ).

### Conclusion:

Dkk-1 serum levels in patients with osteoporosis was higher than normal patients but we can conclude that standard osteoporosis treatment does not have a significant role in reducing the serum Dkk-1 and increasing the serum OPG, so more multicenter studies with more cases seems to be necessary for certification of this conclusion.

### Keywords:

Alendronate-Osteoporosis- DKK-1 -OPG

## Relative frequency of positivity of ANA, ACLA and ds DNA in the patients with primary diagnosis of chronic idiopathic thrombocytopenic purpura (ITP) followed for two years

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### Introduction:

Idiopathic thrombocytopenic purpura (ITP) is a condition of having a low platelet count of unknown cause. Its appear to be related to antibodies against platelets and known as immune-mediated thrombocytopenic purpura and is usually chronic in adults with durable remission of 20–40%.

In many cases causes is not idiopathic and autoimmune process with antibodies production against platelets being detected in approximately 60% of patients. Most often these antibodies are IgG type against platelet membrane glycoproteins IIb-IIIa or Ib-IX. The stimulus for auto-antibody production in ITP is probably abnormal T cell activity. Adult idiopathic thrombocytopenic purpura (ITP) is an acquired autoimmune disease that may be associated with other autoimmune disorders and a positive antinuclear antibody (ANA), ds DNA and ACLA. The risk of later development of systemic lupus erythematosus (SLE) in idiopathic thrombocytopenic purpura (ITP) is currently unknown.

In this study we want to determine the rate of the patients who have positive ANA, ACLA and ds DNA in 2 years follow up and progression to overt SLE.

### Methods and material: S

eventy patients with ITP were entered in this study. The patients with other cause of thrombocytopenia were excluded. We evaluate the patients with CBC, Platelet, chemistry, ESR, U/A every 3 months and ANA, dsDNA, ACLA tests each year for two consecutive years. HIV, HBV and HCV infection were excluded. Relation between positivity of the ANA, ACLA and dsDNA tests and progression to SLE and any related symptoms was evaluated.

### Results:

Overall 70 patients were enrolled in this study. Majority (60%) of them were female and the mean age was 37.2 years old. In evaluation of ANA test 17.1% were positive in first and 12.9% in the second year. ACLA test at the first year was positive in 35.7% and at the second year 33.3% and for ds DNA test was 11.4% at the first year and 33.3% in second year. Overall ANA and ds DNA tests were more positive in females than male without significance. ACLA test was more positive in females than male, which was statistically significant. History of Photosensitivity was significant in

patients with Positive ds DNA and arthritis was common in positive ANA cases but other manifestations were not significant. overall development of overt SLE was not statistically different in the patients with positive and negative ANA, ACLA, ds DNA

**Discussion:**

The rate of positive ANA was relatively low in the patients in the first and second year. Moreover there wasn't a significant relation between the positivity of ANA test and development of SLE in the the follow up. ACLA test was positive in one third of the patients, but no significant changes detected in the first and second years. On the other hand there wasn't any significant relation in the patients with both neither positive nor negative ANA test and development of SLE in the 2 years follow up.

Rate of positive ds DNA test was low in the first year but it was significantly raised in the second year. But no significant relation was detected between the positive ds DNA and development of SLE.

At the end we suggest that there isn't any significant correlation between positive ANA, ACLA and ds DNA test results and development of SLE in the ITP patients but some of the clinical manifestations may related to the positivity of tests .

## Effect of continuous care model on SLE patients' knowledge, health-related quality of life and their families' knowledge in patients' view

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### Introduction and objectives:

With improvement in survival of patients with Systemic Lupus Erythematosus (SLE) during recent decades, conduction of continuous self-care programs (consisting of education and follow up) have been highly recommended. The Iranian model of self-care management was primarily studied in a group of SLE patients. The aim of current study was to evaluate the effect of applying continuous care model on SLE patients' knowledge and health-related quality of life as well as families' understanding of disease.

### Material and methods:

Thirty four SLE patients enrolled into this cross-sectional study. Two sets of questionnaires were designed for evaluate patients' and their perception of families' knowledge of SLE. Furthermore a questionnaire was handed to patients in order to evaluate health-related quality of life (SF-36). The patients were asked to fill the questionnaire before and 3 months after intervention. Data was analyzed by SPSS software 19.0. Paired sample t-test, Pearson correlation coefficient and one way ANOVA were applied to execute the results.

### Results:

Data analysis demonstrated significant improvement in patients and families' knowledge of disease. Furthermore in 6 out of 8 subscales of quality of life improvement was noticed ( $P < 0.001$ ). However in two subscales of somatic pain and social function, no significant difference was detected. Before intervention in 6 subscales SLE patients had poorer status in comparison with normal population ( $P < 0.05$ ). In two features (somatic pain and mental health) SLE patients did not show significant difference with normal population.

### Discussion:

Results of our study underline the advantages of applying continuous care model in SLE patients. This model is an available and cost-effective method which significantly

improved SLE patients' and their families' knowledge of disease. Furthermore 6 out of 8 subscales of quality of life showed significant improvement after applying the continuous care model.

**Keywords:**

Systemic lupus erythematosus, Quality of life, Self care



## Comparison of serum levels of fibroblast growth factor-23 in patients with diffuse scleroderma, limited scleroderma and normal population

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FGF-23 is a member of the FGF family, and seems to be actively involved in phosphate homeostasis and skeletogenesis. Inactivation of the FGF-23 gene was shown to be associated with hyperphosphatemia and ectopic calcification due to reduced biological activity of FGF-23. Soft tissue calcification (calcinosis) is a clinical feature of systemic sclerosis (scleroderma) which is a chronic autoimmune disease. FGF-23 has been evaluated as a factor in the pathogenesis of scleroderma.

### Objective:

We assessed the serum level of FGF-23 in a group of scleroderma patients (both diffuse and limited type) compared to normal population and evaluated the differences between these groups.

### Design:

We selected 88 subjects consisting of 30 patients with diffuse scleroderma, 30 with limited scleroderma and 28 normal subjects. For each subject, serum FGF-23 was measured using FGF-23 ELISA kit.

### Results:

The mean serum level of FGF-23 was  $23.44 \pm 14.86$  in diffuse scleroderma patients,  $20.01 \pm 13.92$  in limited scleroderma patients, and  $23.09 \pm 11.45$  in normal population. There was no significant difference between these three groups.

### Conclusion:

The mean serum level of FGF-23 in this study showed no significant difference between systemic sclerosis patients and normal population.

## **Bilateral Irritable Hip: A Rare Presentation of Leukemia in Children**

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### **Introduction and objectives:**

Bone pain in children is common. The cause may be as benign as growing pains or as life-threatening as a malignancy. Orthopaedic manifestations of acute leukaemia and solid tumors such as neuroblastoma can mimic septic arthritis, osteomyelitis or transient synovitis.

### **Material and methods:**

We reported a 5 years old boy with acute onset bilateral hip pain and low back pain and didn't have weigh bearing due to acute leukemia diagnosis.

### **Discussion and conclusion:**

In systemic disorder usually anemia of chronic disease presented with normochrom normocytic or microcytic anemia, but Our patient had a age adjusted macrocytic anemia which suspeciosed us to bone marrow involvement. Because the sometimes initial presentation of patients with malignancies involve the musculoskeletal system, physicians need to recognize the symptoms of this disease to avoid misdiagnosis and to expedite the initiation of appropriate potentially lifesaving treatment.

## Serum Homocystein Level in Patients With Scleroderma

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**Introduction and objectives:** Systemic Sclerosis (SSc) is a systemic connective tissue disease. In this study, we compared the serum Homocystein (Hcy) level between patients with SSc and normal control group. The current study was conducted to determine whether serum Hcy levels are elevated in SSc patients and whether there is any correlation between Hcy levels and RP, Gastro intestinal and lung involvement.

**Patients and Material and methods:**

Forty one patients who fulfilled the diagnostic criteria for SSc (39 females and 5 males) and Forty four community based healthy individuals (sex and age matched) were enrolled in to the study. Serum Hcy, vitamin B12, and folate levels were determined.

**Results:**

Thirty three patients (70.45%) had GI involvement, twenty two patients (50%) had lung involvement and twenty seven patients (61.36%) had Raynaud's phenomena. Mean serum Hcy level in control group was  $22.78 \pm 6.018 \mu\text{mol/L}$  and in case group was  $19.43 \pm 7.205 \mu\text{mol/L}$ , shows that the serum Hcy level in control group was significantly higher than patients ( $P = 0.020$ ).

**Discussion and conclusion:**

Serum Hcy level is significantly lower in SSc patients than in control group. There is no statistically significant correlation between serum Hcy level and organ involvements.

## Evaluation of Correlation between Adipokines (leptin, visfatin) and Radiographic Joint Damage in Patients with Rheumatoid Arthritis

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### Introduction:

Rheumatoid arthritis (RA) is a chronic systemic inflammatory disorder, primarily targeting the synovium and articular cartilage that leads to joint damage. Recent reports have suggested the role of adipocytokines in mediating joint damage; however it still is a matter of debate. The purpose of this study was to evaluate the association between serum values of adipocytokines (leptin, visfatin) and radiographic joint damage in patients with RA.

### Material and Method:

Fifty-four patients diagnosed with rheumatoid arthritis, based on Revised ACR Criteria 2010, with 1-5 year disease duration since diagnosis, were enrolled. Twenty-nine of patients had erosion in radiographic studies and twenty five patients had no erosion. Radiographic joint damages were defined according to Larsen Score. Additionally, serum levels of adipocytokines were measured and cross-sectional associations with radiographic damage were explored, adjusting for pertinent confounders.

### Result:

The serum level of visfatin were significantly higher in patients with radiographic joint damage compared with patients with no joint damage ( $p=0.013$ ). This difference remained significant after adjustment for C-reactive protein levels ( $p=0.008$ ), but not after adjustment for disease duration ( $p=0.247$ ). The mean leptin serum levels were not different between these two groups ( $p=0.903$ ). There was a positive correlation between leptin levels and BMI ( $r=0.494$ ,  $p<0.001$ ). However, after adjustment for BMI, Leptin levels had no difference between two groups ( $p=0.508$ ).

### Conclusion:

This study revealed that visfatin levels were significantly higher in patients with radiographic joint damage dependently to disease duration. Therefore, it seems that adipocytokine may be a valuable factor in therapeutic targets in the future.

### Keywords:

Rheumatoid arthritis, Adipocytokine, Leptin, Visfatin, Larsen score

## The agreement between FRAX and GARVAN method in determination of osteoporotic fracture

**Mohsen Mohamadi**

The purpose of this cross sectional study is to determine the coefficient of agreement between FRAX and Garvan methods in prediction of osteoporotic fracture in patients referred to Loghman Hakim Hospital.

### **METHODS:**

In this cross-sectional study 131 women aged >60 years who referred to Rheumatology Clinic of Loghman Hakim hospital, were selected. Inclusion criteria were existence of osteopenia which has been confirmed by bone mineral densitometry. Exclusion criteria included: treatment by Alendronate or other bisphosphonates, calcitonin and raloxifene and also have a history of major depression. Information was gathered by interview. For calculating probability of major (Spine, forearm, arm) and hip fracture in the next 10 years and also identify patients who need treatment we used two risk score models based on online system [www.shef.ac.uk](http://www.shef.ac.uk) for FRAX method and [www.garvan.org.au](http://www.garvan.org.au) for Garvan method. The obtained data was analyzed by SPSS 18.

### **RESULTS:**

This study showed that there is no agreement between the two methods for prediction of the hip and major fractures. The study also showed that the group who need to treatment based on GARVAN method had more risk factors than the group who did not need to treatment.

### **CONCLUSION:**

we should evaluate risk score models in our country for using them in clinical practice. If the side effects and cost of treatment is too low it is better to use GARVAN method for prediction of fracture risk in the next 10 years.

### **Keywords:**

Coefficient of Agreement, FRAX, GARVAN, Treatment, Osteopenia

## Nasal carriage of Staphylococcus aureus in lupus patient and rate of MRSA and correlation with relapse

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### Introduction and Objectives:

Systematic Lupus erythematosus is an autoimmune disease with an unknown origin that mainly affects young females. This disease cause a broad spectrum of signs and symptoms in a majority of body organs .the environmental factors such infections plays a major role in the pathogenesis of the disease .due to several factors like damage to mucosal surfaces, defect in complement system these patients are at a great risk of infections. Infection with opportunistic pathogens is one of these infections that can cause exacerbation and relapse of the disease. The aim of this study is the evaluation of nasal carriage of staphylococcus aureus in lupus patient and rate of MRSA and correlation with relapse.

### Material and Methods:

In an analytical descriptive study we studied 80 patients with lupus attending in the Rheumatology Clinics of Tabriz University of medical sciences, the specimens are taken from the nasal mucosa of the patients and were incubated in appropriate culture environment. We followed patients for 1 year and evaluated the relapse of the disease.

### Results:

The mean age of patients was  $24.35 \pm 5.87$ , 81.3% was female and 18.7% was male, the mean time of the disease in patients was  $3.66 \pm 2.27$  yrs, the mean SLE disease activity index was  $6/40 \pm 2.84$ . 39 out of 80 patients has positive Staph aureus in nasal mucose, there was no significant difference between the group with nasal carriage of SA and group without nasal carriage of SA in SLEDAI, gender, age and renal diseases, but two groups was significantly different in relapse and complement levels.

### Conclusion:

Findings of this study indicates that relapse of SLE in patients which has SA in their nasal mucosa is higher than patients without this bacteria.

## Reduced postural stability after manual massage of the human plantarflexors in middle-aged adults

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### Introduction:

postural instability is a problem primarily associated with increasing age. A number of risk factors have been identified that can affect the postural control. Several studies have shown that manual massage which is widely used by older adults can improve postural control through increasing the somatosensory information. But, it is stated that deep stroking massage has an inhibitory effect on the muscles and the sensory receptors. Therefore, The purpose of this study was to investigate the effects of lower limb massage on the postural control in closed and open eye conditions.

### Method and materials:

Twenty two female subjects participated in this quasi experimental study. Calf muscles deep stroking massage was applied for 8 minutes (4 minutes for each leg) by an expert physiotherapist. Centre of feet pressure (COP) displacements and velocity along the mediolateral (ML) and anteroposterior (AP) axes were recorded by a force platform (Kistler<sup>®</sup>, Switzerland) immediately before and after the massage technique.

### Results:

The results of this study demonstrated that there was a significant difference in mean COP displacement and velocity along the ML axis in closed eye condition after applying the massage technique.

### Conclusion:

It seems that lower limb massage can induce a significant impairment in postural stability and balance.

### Key words:

Deep stroking massage, postural stability, Center of pressure

## Evaluation of IL17A, Foxp3 and CTLA4 gene expression in SLE patients including lupus nephritis patients and their relation to disease severity

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### Introduction:

Elevated level of IL17, have been found in a number of autoimmune disorders including SLE. Foxp3 activates T-regulation lymphocyte and is effective as a master regulator in regulation and the type of cell function. The CTLA4 gene and its related antigen; CTLA4; plays a similar role. We investigated the role of IL17, FOXP3 and CTLA4 genes expression in SLE patients with and without nephritis.

### Material and Method:

49 patients and 26 healthy controls were enrolled in this study. Blood samples were obtained in fasting state. Sera were stored at -70°C. PBMCs were obtained by Ficoll density gradient. The cell suspension was transferred to each well of 24-well plates. Cultures were stimulated with phorbol myristate acetate plus ionomycin for 4 h in the presence of monensin (1.7 µg/ml; all from Sigma to Aldrich, St. Louis, MO). The incubator was set at 37°C under a 5% CO<sub>2</sub> environment. Mann-Whitney U test was used to evaluate differences between groups.

### Results:

IL17, FOXP3 and CTLA4 expression in T-cells was significantly higher in SLE patients than the controls ( $p < 0.0001$ ). When comparing nephritis group and no nephritis group to control group individually, the expression of mentioned genes is higher too ( $p < 0.05$ ).

There was no significant difference when comparing expression of IL17, FOXP3 and CTLA4 genes in nephritis group and no nephritis group

### Conclusion:

IL17, FOXP3 and CTLA4 expression in T-cells was significantly higher in SLE patients than the controls and this result has positive correlation in both nephritis and no nephritis groups.

### Keywords:

SLE, Th17, T-reg, CTLA4, FOXP3, IL17A



## Is there any association between BMI (Body Mass Index) and severity of rheumatoid arthritis?

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### Introduction and objectives:

Rheumatoid arthritis (RA) is a chronic inflammatory disease. Cytokines are involved in RA pathogenesis. Different factors like genetic, dietary intakes and hormonal status influence inflammation. However, the influence of obesity on severity of RA is still debatable. Some previously published papers discussed about the mechanisms of obesity in deterioration of clinical status of RA. In obese subjects macrophages infiltrate adipose tissue and secrete inflammatory cytokines. Although, other investigators showed an increased serum levels of inflammatory markers and high mortality rates in patients with low body weight. Thus, these inconsistent findings underscore the need for further research in this area.

### Material and methods:

Fifty eight women with definitive rheumatoid arthritis were participated in this study. Being pregnant, lactate or post-menopause, using dietary supplements and having other disorders were excluded from the study. DAS-28 which is a standard measure of disease activity was assayed by a rheumatology specialist. BMI is calculated as the weight in kilograms divided by the height in meters squared. The possible confounder factors like diet, physical activity and hormonal status were considered. Then, data were entered in SPSS (Ver.11.5) and the relationship was evaluated by spearman correlation.

### Results:

Obese and overweight patients were 46.6% and 29.3% of our population, respectively. 70.7% of patients were classified in remission, 19% in mild, 8.6% in moderate and 1.7% in severe groups. Spearman correlation coefficient between BMI and DAS28 was 0.26 ( $P_{\text{value}} = 0.048$ ).

### Discussion and conclusion:

Present results are indicative a significant weak correlation between obesity and disease activity (according to Cohen's classification). There are several lines of evidence in support of these findings, which assay the association of obesity and serum inflammatory factors like adipokines. We concluded that control of weight can be a very important strategy in remission of rheumatoid arthritis severity.

### Key words:

Rheumatoid Arthritis, Body Mass Index, obesity, Disease Activity Score

## **Relationship between Serum level of Interleukin-2 in patients with SLE and Disease Activity Index in comparison with control group**

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### **Introduction and objectives:**

Despite the large number of surveys, there are not any validated biomarkers for SLE disease activity till now. This study aimed to evaluate the relationship between serum level of IL-2 in patients with SLE and disease activity index in comparison with control group.

### **Material and methods:**

In this case-control study with convenience sampling, 73 patients with lupus and 73 healthy subjects referred to the rheumatology clinic of 5 Azar Hospital in Gorgan (North of Iran) were studied. Blood samples were taken from both groups and serum levels of interleukin -2 measured by AviBion human IL-2 ELISA kit. Serum Level of IL-2 greater than 15pg/ml defined positive and lesser than this amount defined negative. Disease activity evaluated with SLE disease activity index. Score greater than or equal to 3 or 4 defined as active disease. Data analysis conducted by SPSS software (version 16) and by using descriptive statistics and statistical tests.

### **Results:**

Serum level of IL-2 was positive in 45.2% of sample studied and negative in 54.8% in case group, while in control group, serum level of IL-2 only in 11% of sample studied was positive and in 89% was negative. Statistical analysis indicated a significant relationship between serum level of IL-2 and the SLE disease activity index ( $P=0/025$ ).

### **Discussion and conclusions:**

Finding of the study showed the relationship between serum levels of IL-2 and disease activity index, so this biomarker can be used as a clinical indicator for assessing disease activity in patients with SLE.

### **Key words:**

Interleukin-2, Systematic Lupus Erythematosus, Disease Activity Index.

## The association of Body Mass Index with Disease Activity and Clinical Response to Methotrexate in Patients with Rheumatoid Arthritis

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### Introduction and objectives

#### Aim:

Previous studies revealed controversial results on the role of obesity/adiposity in the clinical course of rheumatoid arthritis (RA). We investigated the association of body mass index (BMI) as well as other anthropometric measures with disease activity and treatment response in RA patients.

#### Material and methods:

We studied 106 patients with RA who had active disease (Disease Activity Score using 28 joint counts (DAS28) > 3.2) and had not received disease-modifying anti-rheumatic drugs in the preceding year. Demographic and clinical data were gathered and height, weight, and waist and hip circumferences were measured. Patients were treated with methotrexate (7.5 to 10 mg/week) and prednisolone and then were followed by DAS28 every 12 weeks for 24 weeks.

#### Results:

Mean age was  $48.5 \pm 13.8$  years, 87.7% were female, and disease duration was 4.4 years [SE = 0.48]. DAS28 was significantly decreased from  $4.5 \pm 1.6$  to  $3.3 \pm 1.5$  ( $P = 0.005$ ), and then to  $2.9 \pm 1.4$  ( $P < 0.001$ ), respectively after 12 and 24 weeks of treatment. BMI ( $r = -0.415$ ,  $P = 0.005$ ) and waist circumference ( $r = -0.296$ ,  $P = 0.05$ ) were significantly correlated with baseline DAS28, only in patients with disease duration of  $\leq 2$  years. BMI or other anthropometric measures were not associated with treatment response by controlling for baseline disease activity and other possible confounding factors in multivariate analysis.

#### Discussion and conclusion:

Higher BMI and adiposity are associated with less severe disease activity in early stage of RA, but are not associated with response to monotherapy with methotrexate in RA patients.

#### Key words:

Rheumatoid arthritis; adiposity; obesity; adipose tissue; methotrexate; treatment outcome

## The Effect of Raloxifene on bone mineral density in osteoporotic postmenopausal women with stage 5 chronic kidney disease and on chronic hemodialysis

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### Introduction and objectives:

Hypoestrogenemia in climacterium causes high turnover bone metabolism, relative dominance of bone resorption, and osteopenia. Moreover, high turnover bone metabolism is commonly observed in patients with chronic kidney disease (CKD). Therefore, postmenopausal women on hemodialysis or CKD postmenopausal women might be at high risk for osteoporosis in addition to chronic kidney disease-mineral and bone disorders.

### Material and methods:

The patients were randomly assigned to a group (oral Raloxifene, 60 mg/ daily, N=30) or placebo (N=30) by consideration of the same distribution of age and intact parathyroid hormone (iPTH) level. Baseline blood determinations and bone mineral density (BMD) were done and after 8 months repeated again. Blood analysis for serum levels of total calcium, phosphorous, alkaline phosphatase and iPTH.

Baseline bone mineral density (BMD) and blood analysis for serum levels of total calcium (Ca), phosphorous (Ph), alkaline phosphatase (ALP) and intact parathyroid hormone (iPTH) were done and after 8 months repeated again.

### Results:

There was a significant decrease in iPTH in both groups that had no notable differences between two groups ( $p=0.37$ ) and also Ph level was decreased 1.8% in two groups. After 8 months of treatment, the BMD of the lumbar spine and femoral neck decreased 1.9% in the control group. In contrast, an increase in BMD was observed in the raloxifene group, with an average increase in both BMD of lumbar spine and femoral neck of 2% that was significant in lumbar spine ( $p=0.01$ ).

### Discussion and Conclusion:

Raloxifene has proven to be an effective drug in terms of bone mineral density, with no adverse effect. But it had no effect on controlling hyperparathyroidism in our patients. The long term study should be done to analyze effects of this drug in CKD and dialysis patients.

### Key words:

Raloxifene, chronic kidney disease, secondary hyperparathyroidism, osteoporosis

## Effect of soy milk consumption on adiponectin and leptin as biomarkers of cardiovascular risk factors in overweight patients with rheumatoid arthritis

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### Introduction and objectives:

Rheumatoid arthritis (RA) is a chronic inflammatory disease with increased morbidity and mortality from premature cardiovascular disease (CVD). Adipocytokines have a main role in pathophysiology of RA and can be associated with CVD. Traditional Soy foods and isoflavones (phytoestrogens) have gained considerable attention for their potential role in improving risk factors for CVD. This study was designed to determine the effects of soy milk consumption compared with cow's milk on adiponectin and leptin among patients with RA.

### Material and methods:

This randomized, crossover clinical trial was conducted on 25 patients (mean age= 45.72±2.36) with RA. This study had two 4-week intervention periods: 1) regular diet with soy milk (one glass per day) and 2) regular diet with cow's milk (one glass per day). The wash-out period was two weeks. From the patients who received soy milk in the first intervention period was asked to replace cow's milk instead of soy milk, and vice versa. Anthropometric indicators, blood pressure (BP) and Serum levels of adiponectin and leptin were measured before and after of each intervention.

### Results:

Soy milk consumption resulted in a significant reduction in adiponectin levels (baseline: 38.39±2, end: 30.71±1.9; P<0.001). However, this reduction was not significant in compared with cow's milk (percent change: -19.03±3.5 vs. -2.59±8.9%; p>0.05). We have not seen any significant differences in leptin levels, weight and BP between two interventional periods.

### Discussion and conclusion:

Soy milk consumption for 4 weeks could decrease serum levels of adiponectin, and had no significant effects on leptin, weight and BP in patients with RA. Further investigations were necessary to confirm these effects.

## The effect of progressive muscle relaxation on intensity of pain in rheumatoid arthritis patients

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### Introduction and objectives:

Rheumatoid arthritis (RA) is a chronic disease and has the highest rate of prevalence among rheumatic inflammatory diseases. The purpose of this study was to determine the effect of Progressive Muscle Relaxation Technique (PMRT) on intensity of pain in patients with RA.

### Material and Method:

Following ethical approval, 62 consecutive matched patients were selected and allocated into two groups, either an experimental or a control group. The experimental group exercised 30 minutes daily for 8 weeks, while no intervention was made in the control group. Intensity of pain were measured with VAS Scale before and after intervention.

### Result:

Student t-test showed that there was no significant difference between two groups in mean scores of intensity of pain before the study ( $p=0.45$ ) but this test showed a significant difference between two groups after intervention ( $p=0.02$ )

### Conclusions:

Progressive Muscle Relaxation Technique is practically feasible and is associated with reduce intensity of pain of RA patients; so that health professionals need to update their knowledge about complementary therapies.

### Key words:

Rheumatoid arthritis, Progressive Muscle Relaxation Technique, RA, PMRT

## Time sequence of hyalgan effects in knee osteoarthritis

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### Background:

Osteoarthritis is the most common arthropathy and one cause of disability in old age. ACR criteria in patients with OA are age over 50 years, crepitation, morning stiffness less than 30 minutes and radiographic evidence. Molecular weight and concentrations of hyaluronic acid are reduced in patients with osteoarthritis that Hyalgan injection is based on this base. The purpose of this study is investigation of long-term effects of Hyalgan treatment in pain, range of motion and Impact on daily activities of patients with osteoarthritis.

### Materials and Methods:

After the accurate diagnosis of osteoarthritis (according to ACR criteria), measurement of joint line tenderness, ROM and pain intensity on the VAS (In different state such as sleep, walk, sit, etc.) and the WOMAC questionnaire, three joint injections (every week) will be considered. Then, patients at one week, one month, three months, eight months, and nine months after the end of treatment were re-evaluated. The results were analyzed by SPSS 16 software.

### Results:

In investigation of 61 patients, the most of pre-treatment variables compared with various stages of treatment, there was a statistically significant difference in all phases. The change was remitting up to third week of treatment that this trend is partially preserved up to 4 months of intervention, but after that, it was a little worse. It is noteworthy that even in the final follow-up compared with the initial visit; it still remains a significant therapeutic effect of Hyalgan.

### Conclusion:

These results indicate the beneficial effects of this type of therapy be short-term and medium-term. These effects include a decrease in the resting state of the pain, in rest, walking, sitting, etc. Increase range of motion and reduce joint line tenderness. We should say about the long-term effects that these cases were less than the effects of short and medium term. But compare with before the intervention, the signs and symptoms significantly reduced.

### Key words:

Knee Osteoarthritis, Hyaluronic acid, Intra articular Injection

## The Effect of Antioxidant Supplement on Asymmetric Dimethyl Arginin in with Rheumatoid Arthritis Patients

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### Introduction and objectives:

Oxygen free radicals have been implicated as mediators of tissue damage in patients with rheumatoid arthritis (RA). This study was designed to elucidate The effect of complemented "SELEN PLUS" antioxidant supplementation on clinical manifestation and serum level of Asymmetric Dimethyl Arginin (ADMA), high sensitive C-Reactive proteins (HS-CRP) and in Female Patients with Rheumatoid Arthritis.

### Material and Method:

This is a clinical trial study, surveyed by choosing forty RA females between 40\_60 ages with a moderate to severe disease. Disease activity scale (DAS- 28) and serum levels of ADMA, HS-CRP were measured two times (before and after intervention).

### Results:

In Patients, serum levels of Hs-CRP, ADMA, and HS-CRP were elevated in comparison with normal. ( $p=0/003$  and  $p=0/019$ ) but ADMA levels, number of stiffed joints and painful joints did not show significant changes after 3 months. In addition, there were a positive linear correlation between DAS-28 change score and Hs-CRP changes (with coefficient correlation of  $r=0/922$  and  $p=0/001$ ).

### Discussion and Conclusion:

Complemented "SELEN PLUS" antioxidant supplementation make significant change in Hs-CRP level but it does not make any significant changes in ADMA levels in Female Patients with Rheumatoid Arthritis



## The Effect of Antioxidant Supplement on Vascular Endothelial Growth Factor in with Rheumatoid Arthritis Patients

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### Introduction and Objective:

Oxygen free radicals have been implicated as mediators of tissue damage in patients with rheumatoid arthritis (RA). This study was designed to elucidate The effect of complemented "SELEN PLUS" antioxidant supplementation on clinical manifestation and serum level of high sensitive C-Reactive proteins (HS-CRP) and Vascular Endothelial Growth Factor (VEGF) in Female Patients with Rheumatoid Arthritis.

### Material and Method:

This is a clinical trial study, surveyed by choosing forty RA females between 40\_60 ages with a moderate to severe disease. Disease activity scale (DAS- 28) and serum levels of HS-CRP and VEGF were measured two times (before and after intervention).

### Results:

In Patients, serum levels of Hs-CRP, VEGF and HS-CRP were elevated in comparison with normal. ( $p=0/003$  and  $p=0/019$ ) but VEGF, number of stiffed joints and painful joints did not show significant changes after 3 months. In addition, there were a positive linear correlation between DAS-28 change score and Hs-CRP changes (with coefficient correlation of  $r=0/922$  and  $p=0/001$ ).

### Discussion and Conclusion:

Complemented "SELEN PLUS" antioxidant supplementation make significant change in Hs-CRP level but it does not make any significant changes in VEGF levels in Female Patients with Rheumatoid Arthritis

## Is Bone Mineral Density as marker for Breast Cancer?

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### Introduction and Objective:

Breast cancer is a common problem in society. Several risk factors identified for breast cancer; however, 70% of females who develop breast cancer had no risk factor. Many risk factors are associated with sex steroid hormones. In recent years many studies have been focused on identification of the indices of cumulative exposure to estrogen which a person is encountered during the life. One of these indicators is measurement of bone density which can increase by prolonged exposure to estrogen. Aim of this study is to find relation between breast cancer and bone density.

### Material and Method:

In this case – control study, we evaluated 120 individuals, 40 patients in case group and 80 persons without disease as control group. Measurement of bone density was performed using Hologic device (USA QDR 4500 elite) with energy X-Ray absorptimetry dual technique.

### Results:

Both groups breast cancer case and control group had no significant difference in terms of age, height, weight, education level, age at menarche, age at first marriage, age at first pregnancy, number of pregnancies over 32 weeks and lactation period as well as taking supplemental calcium and vitamin D, milk consumption and its successor. But there was a significant difference between the two groups in terms of estrogen intake, family history of breast cancer and history of benign breast masses,  $P < 0.001$ ,  $P < 0.003$ ,  $P < 0.037$ , respectively. A significant difference was found between BMD, BMC, and T-score of lumbar spine between the two groups that was higher in the control group.

### Discussion and Conclusion:

The study shows bone density of patients with breast cancer is not higher than normal female. It seems that high bone density was risk factor for breast cancer in elderly compared with young women.

## Behcet's disease in Azerbaijan

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### **Introduction and objectives:**

Behcet's disease is a chronic inflammatory disease that involves ocular, articular, vascular, cutaneous, intestinal, urogenital and neurological systems. We evaluated the demographic and clinical manifestations of Behcet's disease in 127 patients in rheumatology clinic of Tabriz University of Medical Sciences

### **Material and methods:**

In a cross sectional study we considered the demographic and clinical findings of Behcet's patients and compared them between females and men. Behcet's disease diagnosed by the International criteria of Behcet's disease. Disease activity was measured by Iran Behcet's Disease Dynamic Activity Measure.

### **Results:**

Male to female ratio was 1.6:1, the age of disease onset was 25.8±9.9. The first symptom of disease was oral aphthous ulcer in 71.2%, genital aphthous ulcer in 21.3%, ophthalmic involvement in 13%, pseudofolliculitis in 6.3%, articular involvement in 3.1%, erythema nodosa in 2.4%, and vascular involvement in 0.8%. HLAB5 was positive in 55.9%. The most frequent symptoms were oral aphthous ulcer (93.7%), eye involvement (54.3%), genital aphthous ulcer (49.6%), positive pathergy test (33.9%), pseudofolliculitis (25.9%), erythema nodosa (15.7%), and musculoskeletal involvement (14.2%). Severe vision loss including vision less than 1/10 was seen in 15% of patients. No differences in disease activity and organ involvement was seen between male and female.

### **Discussion and conclusion:**

In comparison with Rheumatology Research Center (RRC), Japanese and Turkish data we cannot find any significant differences. Although in comparison with Japanese patients (43.2±9.9) our patients were younger, skin and intestinal involvement was less frequent.

## Demographic and paraclinical factors in tuberculosis patients with musculoskeletal symptoms referred to TB referral center of shiraz university of medical sciences, from 2002-2012

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### Introduction and Objectives

Tuberculosis causes ill-health among millions of people each year and ranks as the second leading cause of death from an infectious disease worldwide. Globally, skeletal tuberculosis represents one-third and in Fars province 14.6% of all extra-pulmonary TB. We aimed to determine demographic and paraclinical factors in musculoskeletal TB patients.

### Material and Methods

All records of TB patients that one of their presentations was arthralgia, bone pain or myalgia and referred to TB referral center affiliated with shiraz university of medical sciences from 2002 to 2012 were included in this study.

### Results

One hundred four patients were studied with mean age:  $43.1 \pm 19.9$  and male (62; 59.6%) to female (42; 40.4%) ratio of 1.4. More than two-third (70.2%) were Irani and 97 (93.3%) settled in urban regions of Fars province. Forty seven (45.2%) and 45 (43.3%) were referred to this center by specialists and hospitals respectively as cases of musculoskeletal TB. Fifty three (51%) had fever including 43 (41.3%) with sweating and 62 (59.6%) had weight loss. All (100%) had bone pain and 95 (91.3%) presented with arthralgia and 9 (8.7%) with myalgia. Only 7 (6.7%) had history of TB in the past and 8 (7.7%) had diabetes mellitus while 13 (12.5%) had opiate addiction and most of them (63.5%) did not have any known background disease. Median of PPD skin test

was 13 mm with mean:  $12.2 \pm 9.4$ . The patients had history of  $4.9 \pm 2.6$  times ( by median 4 ) referral to different physicians before their final diagnosis as TB.

#### **Discussion and Conclusion**

Musculoskeletal TB as one of the most common types of extra-pulmonary TB has been remained in our region, therefore it should be considered as one of the main differential diagnosis when face to patients with chronic musculoskeletal symptom(s).

#### **Key words :**

Tuberculosis, Musculoskeletal, Bone pain, Arthralgia, Myalgia

## Relational Study of Clinical and Renal Pathology of Systemic Lupus Erythematosus Patients in Mashhad, Iran

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### Introduction and objectives:

Systemic Lupus Erythematosus (SLE) is a complex immunologic disorder with multiple abnormalities in immunoregulation system which affects different organs. Kidney engagement plays a major role in mortality and disability of SLE patients. Renal biopsy has a major effect on diagnosis, prognosis, and treatment. Renal biopsy is an important issue in evaluating the intensity of SLE in patients. The purpose of our clinical study is to determine the intensity of lupus nephritis in patients and to find out whether clinically evaluated SLE is influenced by the onset of glomerulonephritis. Besides, we are interested in evaluating the relationship between different types of SLE and our geographical location.

### Material and Methods:

In this prospective review we studied 34 hospitalized SLE patients and followed their cases for five years. The process is preformed at the Department of Internal Medicine, Ghaem Medical Center, Mashhad University of Medical Sciences. The staging on renal biopsy was preformed according to WHO classification. All patients had ACR criteria for SLE. All had written informed consent and underwent a routine general physical examination. Clinical and serological characteristics of all patients were consecutively collected in protocol form. Different factors affecting the prognosis of SLE were measured and analyzed using statistical tests.

### Results:

The total number of patients was 34 (32 women and 2 men). The median age of patients was 25.12±12.05 years. Seventy five percent of patients with lupus nephritis progress to renal failure within one year. All of them had lupus nephritis. The most common type of renal pathology was class IV lupus nephritis. Two patients had renal failure. Nine of them had hypertension. The most serious prognosis of SLE had class IV nephritis (p=0.04)

**Discussion and conclusion:**

Age, sex, and renal pathology prevalence of lupus nephritis in this study concerning our geographic area is similar to other studies. Lupus nephritis remains a strong predictor for the death and the development of end-stage renal disease (ESRD) in patients with SLE.

**Key Words:**

Lupus Nephritis, Renal Pathology, Renal Biopsy, Systemic Lupus Erythematosus

## Upper Limb Diabetic Myonecrosis Case Report

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### Introduction

Myonecrosis is a rare and often-missed complication in poorly controlled diabetic patients. Although thigh muscles are the common ones to get involved, there are raising numbers of cases with upper limb muscles involvements as well. Here we report a known case of diabetes that developed left arm myonecrosis.

### Case Report

This is a case of a 53-year-old diabetic woman with 20 years on hypoglycemic agents and one month on insulin injection, suffering uncontrolled HTN, with history of CVA, referred with painful swelling left arm for past 1 week, characterized with warm, tender erythematous mass and excruciating pain on motion, no history of trauma or injection in the site was mentioned. In spite of partially confusing radiologic and orthopedic consultations, misconcluding the case for myositis, cellulitis or polymyositis, and atypical presentation in terms of biceps involvement, we withheld biopsy in order to avoid the risk of delayed healing and superimposed infections as a highly suspected Myonecrosis case from the very first which fortunately turned out to be the absolute final diagnosis. The probable differential diagnosis such as infectious myositis, DVT, polymyositis, cellulitis, osteomyelitis, hematoma were all ruled out based on the evidences of Doppler and MRI which revealed considerable subcutaneous edema, necrosis, Triceps muscle remaining intact, superficial vein collapse, no thrombosis and no abnormal accumulations. CK levels were slightly elevated and aspiration specimen was dry.

As a result of mere supportive treatment, the swelling mass faded away in a month as expected in the proven myonecrotic lesions. As a natural course, in spite of its satisfactory short term symptom resolution, the ultimate results are dramatic due to condition deteriorations. Our case was no exception and aggressive diabetic control to delay complications was of no success, leading to death within a year.

### Discussion and conclusion:

Though mere myonecrosis is of little significance it is a marker of severe underlying vascular disease and poor diabetic control, responsible for the death of majority within 5 years. Since recognition failure results in delayed evaluation for end-organ manifestations of diabetes, this entity should not be neglected in diabetic patients presenting local pain and swelling. This scenario is in support of those believing in MRI adequacy in Myonecrosis diagnosis and calling for bypassing the gold standard "biopsy".



## Effect of MSCs on inflammation: can MSCs reduce PBMC-related IL-6 on co-culture in RA patients?

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### **Introduction and aim:**

Rheumatoid arthritis (RA) is an inflammatory chronic disease that destroys cartilage and bone. Effector T cells and deficiency in controlling of immune homeostasis by Treg cells are two factors play role in pathogenesis. Mesenchymal stem cells (MSCs) and peripheral blood mononuclear cells (PBMCs) co-culture leads to repressing of immune system by Treg cells and reduces inflammatory cytokines. On the other hand in patients with RA, Th17 had been expanded and led to secretion of inflammatory cytokines and repressed Th1 and Th2 by injection of MSCs. IL-6 is a pro-inflammatory cytokine and is the key of Th17 differentiation. In current study the effect of MSCs on PBMCs by IL-6 producing in RA patients was assessed in order to effect of MSCs on reduced inflammation.

### **Material and Methods:**

MSCs of adipose tissue was isolated from 10 patients undergoing caesarean section. On the other hand, PBMCs that isolated from 15 RA patients and 11 healthy controls were added to MSCs in culture. Then, IL-6 expression was determined by ELISA on co-culture supernatants of PBMCs from both groups.

### **Results:**

As results, analysis of cytokine production profile revealed that IL-6 in MSCs-PBMCs co-culture has not significant difference than only PBMCs culture both patients and healthy controls. In addition probably with increased cases, it may be significant.

### **Conclusion:**

Depending on stage on disease, Th17-related cytokines such as IL-6 -as a pro-inflammatory cytokine can be used as diagnostic or following marker in autoimmune disease including rheumatoid arthritis.

### **Conclusion:**

In conclusion, depending on stage on disease, MSCs because of their capacity to immunomodulation by inhibitory cytokines, can be as suitable candidate for treatment RA disease.

### **Keywords:**

RA, MSCs, PBMCs, IL-6

## Reduced IL-17 in Peripheral Blood Mononuclear Cells: Effect of Mesenchymal Stem Cells on Rheumatoid Arthritis Immunomodulation

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### **Introduction and objectives:**

Rheumatoid arthritis (RA) is an inflammatory chronic disease that destroys cartilage and bone. The role of Effector T cells and failure in immunoregulation by Treg cells is proved in RA pathogenesis. IL-17 that is produced by TH17 has vigorous effects on cells of the immune system playing important roles in pathogenesis of autoimmune disorders. On the other hand, mesenchymal stem cells (MSCs), because of their therapeutic roles in many diseases can be used as cell therapy in RA. In current study the effect of MSCs on peripheral blood mononuclear cells (PBMCs) by IL-17 detecting in RA patients was assessed in order to effect of MSCs on reduced inflammation.

### **Material and Methods:**

MSCs of adipose tissue was isolated from 10 patients undergoing caesarean section. On the other hand, PBMCs that isolated from 15 RA patients and 11 healthy controls were added to MSCs in culture. Then, IL-17 expression was determined by ELISA on co-culture supernatants of PBMCs from both groups.

### **Results:**

As results, analysis of cytokine production profile revealed that IL-17 level in MSCs-PBMCs co-culture was less than PBMCs culture lonely in patients but in healthy individuals was not seen any significant differences.

### **Conclusion:**

In conclusion, because of MSCs role in reducing IL-17 as an inflammatory cytokine in PBMCs, can be as suitable candidate for treatment RA disease in immunomodulation.

### **Keywords:**

RA, MSCs, PBMCs, IL-17

## C-Abl Gene Expression Increased in SSc Human Dermal Fibroblast

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### Introduction & Objectives:

Systemic sclerosis (SSc) is an autoimmune disorder characterized by fibrosis of skin and variety of internal organs. Fibroblasts, the key cells in the pathogenesis of SSc, are induced by transforming growth factor- $\beta$ 1 (TGF- $\beta$ 1) profibrotic cytokine and produced increased amount of extracellular matrix proteins (ECM). Cellular abelson (c-Abl), a non-receptor tyrosine kinase, has very important roles in signal transduction, control of the cell cycle, cell motility, proliferation, and inhibition of apoptosis. In addition, c-Abl is crucial for the induction of ECM proteins by TGF- $\beta$ 1. The aim of present investigation is comparison of c-Abl gene expression level between patient and control human skin fibroblasts.

### Material & Methods:

Fibroblast cells were isolated from human dermal fibroblast. The total cellular RNA was extracted and reverse transcribed into complementary DNA (cDNA). The expression of c-Abl gene in SSc and normal dermal fibroblasts was measured by MGB-TaqMan real-time polymerase chain reaction.

### Results:

Data show that the expression of c-Abl in SSc dermal fibroblasts at mRNA level was significantly increased in comparison with normal human dermal fibroblasts. We also found that c-Abl is an important molecule in the pathogenesis of SSc fibroblast.

### Discussion & Conclusion:

Current therapies for SSc focus on treating definite symptoms, and there is no appropriate drug for specially targeting pathogenesis molecules. Our results indicate that tyrosine kinase c-Abl is an important molecule in the pathogenesis of SSc. In conclusion, the inhibition of elevated level of c-Abl expression might be an interesting candidate for the treatment of SSc patients.

## Transforming growth factor- $\beta$ 1 induces collagen production and myofibroblast differentiation in dermal skin fibroblasts

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### Introduction:

Skin fibrosis in fibrotic diseases like scleroderma arises from abnormal production and accumulation of extracellular matrix (ECM) proteins especially collagen type I. It has been shown that transforming growth factor  $\beta$ 1 (TGF- $\beta$ 1) is a key mediator in the pathogenesis of fibrosis. In pathologic conditions, continuous stimulation of TGF- $\beta$ 1 launches signaling pathways in fibroblasts that results in differentiation them into myofibroblasts and excessive secretion of collagen. Myofibroblasts are the main cell types responsible for synthesis and secretion of ECM proteins. These cells are characterized phenotypically by their high levels of  $\alpha$ -smooth-muscle actin ( $\alpha$ -SMA). The aim of the current study was to elucidate that the two fibrotic-related events including expression of  $\alpha$ -SMA and collagen type I occurs in response to TGF- $\beta$ 1 stimulation.

### Material and Methods:

Human dermal fibroblasts were cultured at low density ( $2 \times 10^5$  cell/well) on 60-mm diameter dishes for 4 days. After an overnight serum starvation, cells were treated with different doses of TGF- $\beta$ 1 (2, 10, and 25 ng/ml). Proteins were extracted with RIPA buffer and DOC-TCA method. The changes in protein expression were detected by Western blotting after 24, 48 and 72 hours.

### Results:

Western blot analysis revealed that  $\alpha$ -SMA and collagen proteins increased in a time-dependent manner in TGF- $\beta$ 1-treated fibroblasts, but there was no significant change of protein expression between different doses of TGF- $\beta$ 1.

### Discussion and Conclusion:

High concentration of TGF- $\beta$ 1 in fibrotic tissues was reported in previous studies. We showed that treatment of normal skin fibroblast with TGF- $\beta$ 1 induces fibroblast differentiation and collagen secretion which are the main hallmarks of skin fibrosis. Our data suggests that TGF- $\beta$ 1 pathway may be a suitable therapeutic target for skin fibrosis like scleroderma.

## Evaluation of SNAPC4(rs3812571) gene polymorphism in Iranian patients with Ankylosing spondylitis

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### **Introduction and objectives:**

Ankylosing spondylitis (AS) is a chronic inflammatory arthritis that affects sacroiliac joints and axial skeleton. AS is a polygenic disease with contributions of the immunologically relevant genes HLA-B27, ERAP1 and IL23R. New studies show strong associations between the non-synonymous single nucleotide polymorphisms (nsSNPs) especially rs3812571 in SNAPC4 on chromosome 9q and AS. SNAPC4 is a subunit of the SNAP complex that is required for the transcription of RNA polymerase II and III snRNAs.

The aim of our study is investigating the relationship between SNAPC4 and AS in Iranian population.

### **Material and methods:**

We studied 363 AS patients fulfilling the modified New York Criteria and 501 healthy volunteer donors as control subjects, using ARMS-PCR procedure.

### **Results:**

Distribution of rs3812571 genotypes did not show significant deviation from Hardy-Weinberg equilibrium between patients and healthy controls. The rs3812571 was not significant distribution in patients compared to controls.

### **Conclusion:**

These findings provide a useful guide for future studies aiming to identify the other genes which may be involved in the pathogenesis of AS. In addition, further studies are necessary to determine the biological significance of these findings in relation to susceptibility or severity of the disease.

## **Peripheral gangrene: A rare presentation of systemic lupus erythematosus in a child**

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SLE in children has many manifestations. In several studies on SLE in children, gangrene and Raynaud phenomenon have been described as a rare manifestation of SLE during its course in children. We present a 12-year-old girl, presenting with peripheral gangrene plus Raynaud's phenomenon, who proved to have SLE. Our patient was treated with steroids and mycophenolatemofetil. She appeared to respond to this combination judging by the disappearance of the digital cyanosis, appearance of extremity. This case highlights the importance of precise management and awareness of very rare manifestations of a common disease like SLE. Gangrene can be initial symptom of SLE in children. We recommend SLE evolution in all children with gangrene symptom.

## Prevalence of oral lesions in patients with Lupus Erythematosus in Shiraz

Maryam Mardani

### Background:

Lupus erythematosus (LE) is an autoimmune disease, which may affect multiple organs. This disease affects young women and revealed a wide spectrum of mild skin lesions to arthritis, kidney insufficiency, neurologic disorders, cardiovascular disease and other problems.

### Purpose:

The purpose of this study was to determine prevalence and clinical aspects of oral lesions in patients attended Lupus clinic, Hafez hospital, Shiraz, Iran.

### Methods:

Oral cavity of four hundred patients with confirmed diagnosis of LE, include 73 men and 327 women were examined. A questioner included demographic data, duration of the disease, history of LE in the family, history oral involvement & tenderness of them, form and size of the lesions, involvement of other organs, medications and para clinical findings were prepared presenting oral lesions were included in the study.

### Results:

Oral lesions were found in 268(67%) patients(40 men & 228 women). Age range of the patients was 12-73 years old and the mean age was 32/66 years old. The most common oral lesions was red lesions(%35/08), followed by white lesions(%21/05) & pigmented lesion(%19/29). No exophytic lesions were seen.

### Conclusion:

Due to frequency & non symptomatic oral lesions appearance and probably these lesions may be the first symptoms of the disease, total and frequent oral examination by dentists and oral medicine specialist is necessary.

## Disease Flares Predict the Change to Second Line Therapy in Rheumatoid Arthritis: 9-Year Data from a Longitudinal Observational Study

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### Background:

The role of disease worsening or flares in taking important clinical decisions, such as dose adjustments or treatment change, is poorly understood in patients suffering from severe RA treated with TNF inhibitors over long periods of time.

### Objective:

To determine whether the prevalence of flare episodes can predict the response to anti-TNF treatment over time and the change to second line therapy.

### Methods:

In this longitudinal, observational, population-based, cohort study we included a total of 400 patients. Data were retrieved from the National Health Insurance House (NHIH) database (2002-2011). Flare events were defined according to OMERACT criteria as increase in disease activity score DAS28 >3.2 or >0.6 if DAS28 >3.2. Prevalence of flare episodes, DAS28 response rates and EULAR response rates were calculated every six months.

### Results:

In our analysis, 379 (94.5%) patients presented 672 flare episodes (prevalence 168% in the analysed population).

Period (months)	Nr. of patients (n)	Nr. of flares (f)	Prevalence of flares per period (f/n) %	Percentage of total flares per period (f/672) %
6mo	400	7	1.8	1.0
12mo	387	27	7.0	4.0
18mo	378	51	13.5	7.6
24mo	338	43	12.7	6.4
30mo	318	65	20.4	9.7
36mo	300	89	29.7	13.2
42mo	270	78	28.9	11.6
48mo	229	107	46.7	15.9
54mo	175	65	37.1	9.7
60mo	116	44	37.9	6.5
66mo	89	39	43.8	5.8
72mo	54	31	57.4	4.6
78mo	28	17	60.7	2.5
84mo	12	5	41.7	0.7



The highest proportion (15.9%) of all flares was recorded at 48 months in 229 patients and the highest flare prevalence (60.7%) occurred at 78 months (n=28). The majority 368(54.8%) of flares were recorded as two episodes per patient, whereas 141(21%), 159(23.7%) and 4(0.6%) flares occurred as 1, 3 and 4 episodes per patient, respectively. A single flare episode was significantly associated with 4 fold risk of EULAR lack of response and 4.5 fold risk of HDA, with an OR (95%CI) 4.16 (3.29-5.27) and respectively 4.52 (3.72-5.50) , and  $p<0.0001$  in all.

**Conclusions:**

In current clinical practice in Romania, a single flare episode in patients with aMDA should prompt change to second line therapy, including biological agents with other mechanisms. Our real life results, based on data collected before 2012, support OMERACT flares criteria and ACR/EULAR recommendations, emphasizing strict patient evaluation and tight control in the first 1-3 months after anti-TNF treatment initiation.

## Hypoparathyroidism mimicking ankylosing spondylitis: Case report

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### Report of case:

A 45 year old woman has been referred to Firouzgar hospital, Rheumatology outpatient clinic with history of 10 year progressive inflammatory back, neck pain and more than 1 hr morning stiffness.

She also complained of diffuse myalgia, muscle cramps. Upon physical examination Patient displayed a typical Ankylosing Spondilitis (AS) posture with: decreased spinal mobility, A limited neck rotation, near normal Chest expansion. A modified Schober test measurement of 13 cm ,the Fabere test was positive, her hip movement was restricted in internal rotation. Laboratory investigation was normal except elevated ESR and CRP, AP radiography of the thoracolumbar spine revealed extensive ossification of the interspinous and supraspinous ligaments, and a syndesmophyte formation . Lateral radiography of the cervical spine showed ossification of the anterior longitudinal ligament and enthesopathic changes at the posterior elements. in spite of anti-inflammatory treatment as a Atypical AS no improvement in patient condition was seen. surprisingly during a routine checkup we noticed .

Marked hypocalcemia, elevated phosphorous and a suppress PTH level. Treatment by calcitriol and calcium was started with good clinical and laboratory response. To our knowledge, there is few case reports of idiopathic hypoparathyroidism(HP) simulating AS.

### Conclusion:

This case emphasizes the importance of recognizing rheumatic manifestations of HP to preclude unnecessary treatments and calcium may be included in the diagnostic workup of these patients.

## The prevalence of psychiatric symptoms in patients with systemic lupus erythematosus disease in Shiraz, Iran

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### Back ground:

Systemic lupus erythematosus (SLE) is a chronic autoimmune disorder characterized by multi organ involvement and a broad spectrum of neuropsychiatric symptoms. We designed the study to explore the prevalence of psychiatric symptoms in patients with SLE in Shiraz, Iran.

### Method:

The cross-sectional survey was done in 97 SLE patients by convenience sampling selected in Shahid Motahari Clinic, Shiraz, Iran, from June 2011 to June 2012. The collected data included demographic information, such as age and gender and psychological distress using Symptom Checklist-90-Revised (SCL-90-R) questionnaire. The psychological dimensions of the patients were summarized by descriptive statistics (frequency and percentage). In addition, independent sample T-test was used in order to compare the mean differences of male and female subjects regarding the psychological syndrome.

### Results:

According to the results, 34% of the patients were healthy (Global Severity Index (GSI) <0.7), while others (66%) had different levels of symptoms (GSI>0.7). In psychiatric symptoms' subscales, somatization (91%), depression (87%), and anxiety (77%) were the most prevalent symptoms. On the other hand, paranoid thought and phobia had the lowest prevalence (35%). Based on our findings, the females' average on depression score was significantly higher than that of the male subjects ( $p = 0.032$ ).

**Conclusion:** The prevalence of psychological symptoms was remarkable in the patients with SLE. Therefore, in order to early assessment and treatment of psychological distress, systematic evaluation of all patients for psychological distress in rheumatology clinics is highly recommended.

**Key words:** Systemic lupus erythematosus, psychiatric, checklist, questionnaire

## Effect of curcumin on relieving Behcet's disease symptoms

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### Background:

Tumeric is an Asian native plant that had been used vastly as a herbal medicine and food in middle East for many years. Effective substance in turmeric, curumin, has been approved as an immunomodulator substance. We designed this study to investigate the effectiveness of turmeric for relieving behcet's disease symptoms.

### Patients and methods:

This randomized double blind clinical trial study was done in Shiraz in 2010. 50 subjects with Behcet's disease were enrolled and 36 subjects completed the study. Patients who had active major organ involvement were excluded. While they continued routine treatment, they received the drug treatment (500 mg curcumin) or matched placebo for 3 months. The symptoms of the disease including oral and genital apathae, cutaneous lesions, arthralgia and arthritis were monitored at the end of each month. Wilcoxon signed rank test was done for comparing of mean and S.D symptoms severity.

### Results:

Severity of oral apthae improved at the end of the first month ( P- value= 0.01) and this effect continued till the end of the study. Patients did not experience significant improvement in genital apthae, cutaneous and joint manifestations.

### Conclusion:

Our study showed that turmeric could relieve oral aphatae in Behcet's disease.

## No Association between Human T-cell Lymphotropic Virus Type 1 and Rheumatoid Arthritis in Southern Iran

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### **Aim:**

The Human T-cell Lymphotropic Virus Type 1 (HTLV-1) is a retrovirus with known etiologic role in myelopathy and leukemia. It has been shown that HTLV1 has a possible role in inflammatory arthritis especially Rheumatoid Arthritis (RA). In this study the association between HTLV-1 infection and RA in southern Iran was investigated.

### **Method:**

Thirty five patients with active RA and thirty five patients with osteoarthritis (OA) were enrolled in this study as case and control groups. Fresh Peripheral Blood Mononuclear Cells (PBMCs) and Synovial fluid mononuclear cells (SFMCs) of the both groups were isolated. The DNAs of the cells were extracted and nested PCR using pol gene primers were performed for all the samples.

### **Results:**

None of the patients and controls was positive for HTLV-1 proviral DNA.

### **Conclusion:**

No virus DNA in peripheral blood and synovial fluid mononuclear cells in patients with RA was detected. This is the first study to detect relation between RA and infection in this area which indicated no association between HTLV-1 infection and RA in the southern Iran.

### **Key words:**

HTLV-1, Rheumatoid Arthritis (RA), Southern Iran, Shiraz

## Childhood-onset systemic lupus erythematosus in southwestern Iran: a clinical and serological study

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### Introduction:

Systemic lupus erythematosus is a chronic autoimmune disease with high rate of organ involvement and more severe clinical symptoms among children. **Objectives:** This study aimed to demonstrate clinical patterns and laboratory parameters in children with lupus in southwestern Iran.

### Material and methods:

This descriptive study included 32 patients (23 female and 9 male) aged 3-16 years with systemic lupus erythematosus who were referred to a rheumatology clinic at a university hospital during 12-month period. A complete history was taken; the medical records were reviewed for detecting clinical symptoms and laboratory tests.

### Results:

The mean age at diagnosis was 10.5 years. Female was predominant in the ratio 2.5:1 for children with lupus. Twenty-three patients (71.9%) were diagnosed before referring to our clinic. The most commonly involved organs were skin 30(93.8%), joints 21 (65.6%), kidney 18 (56.3%) and central nervous system 10(31.3%). Laboratory findings at diagnosis showed anemia 19(59.4%), leukopenia 15(46.9%) and thrombocytopenia 3(9.4%). Increased ESR and C-reactive protein was detected in 27(84%) and 16(50%), respectively. There was high level of double-stranded DNA in 30(93.8%) and anti-nuclear antibodies in 27(84.3%) patients. Four patients died within the study period, one from pulmonary hemorrhage, two from end stage renal disease and the other one due to subdural hematoma and renal failure.

### Discussion and conclusion:

In this study, the pattern of most clinical manifestations in childhood lupus resembles other reports of Iran and nearby Arabian countries. Kidney involvement was less; however, the big numbers of ANA negative lupus children was significant.