Midland Rheumatology Society
Spring Meeting 2019

Friday 29th March 2019
Holiday Inn Hotel, City Centre, Birmingham B5 4EW
Hosted by Sandwell and West Birmingham Hospitals NHS Trust

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Dr Caitlyn Dowson, MPFT and Keele University

15.15  Tea/Coffee

15.30  CTD in Paediatric Population  
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5.  The British Society for Rheumatology Multi-Centre Audit of the Management of Adults with Systemic Lupus Erythematosus  

6.  Neurological Dysfunction in Primary Sjogren’s Syndrome  

7.  The Temporal Relationship Between Uveitis and Spondyloarthritis Diagnoses and its Effect on Exposure to Treatment: Results from a Real Life Single Center Spa Cohort Analysis  
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8.  Cardiovascular risk factors in patients with Rheumatoid Arthritis: Results from a cross-sectional single center survey  
Koutsianas C, Kitas G, Douglas KMJ

17.00  Close

18.00  Dinner at Marco Pierre White

Midland Rheumatology Society meeting (code 124482) has been approved by the Federation of the Royal Colleges of Physicians of the United Kingdom for 6 category 1 (external) CPD credit(s)

The meeting is kindly supported by Chugai, UCB, Pfizer, Sanofi, GSK, Abbvie, Novartis, Amgen, Sobi, Merck

Industry sponsors have provided funding for an exhibition stand/space at this educational meeting and have had no control over the agenda, speaker choice or content of the meeting. In accordance with the ABPI code of practice, the funding obtained is solely for the Midland Rheumatology Society meeting educational agenda and is not a contribution to the costs aligned to recreational activities and evening dinner.
Clinical Papers
IMPLEMENTING SCREENING FOR HYDROXYCHLOROQUINE OCULAR TOXICITY – HOW BIG IS THE PROBLEM? EPIDEMIOLOGY OF HYDROXYCHLOROQUINE PRESCRIPTIONS IN THE UK CLINICAL PRACTICE RESEARCH DATALINK

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²Division of Epidemiology and Public Health, University of Nottingham
³Department of Ophthalmology, Nottingham University Hospitals NHS Trust

Background:
Rheumatologists are the main prescribers of hydroxychloroquine; and prescribers are responsible for screening. The Royal College of Ophthalmologists 2018 guidelines on screening for hydroxychloroquine retinopathy recommend a hospital eye clinic examination at baseline, and annually after 5 years, whereas previous recommendations did not require hospital assessments. The guideline did not estimate the additional workload for hospital eye clinics.

Methods:
We used data from the Clinical Practice Research Datalink (CPRD), a nationally representative population-based database of primary care records and prescribing data. We identified people in the CPRD prescribed hydroxychloroquine for any indication and used their prescription records to estimate how long each person had been prescribed hydroxychloroquine.

Results:
On 1 July 2016, 0.25% of people in the CPRD were taking hydroxychloroquine. 0.05% of the CPRD population newly started hydroxychloroquine in 2016. Applying these estimates to the current population of UK (66,692,372), we estimate that 166,673 people in UK are currently being prescribed hydroxychloroquine, and 36,444 newly started it in 2016. CPRD Hydroxychloroquine users were 79.4% female, mean age 59.2 (SD 14.7) years. 86.3% had a recorded diagnosis of SLE or inflammatory arthritis; the remaining 13.7% mainly had skin conditions. At 5 years 46.3% remained on hydroxychloroquine, 31.8.7% at 10 years, and 23.4% at 15 years (Table 1).

Applying our estimates to a single Trust with an acute catchment population of 1.1 million, we estimate that 601 people started hydroxychloroquine in 2016, and to provide a baseline ophthalmology assessment to all current hydroxychloroquine users, 5252 people require assessment this year, and once all users have had a baseline assessment and only new starters and those on therapy longer than 5 years require them, 3783 eye clinic assessments will be required annually.

Conclusion:
Our estimates are higher than in the RCOphth guideline. Our data provide more reliable estimates because we captured prescriptions for hydroxychloroquine for any indication, and were able to count the number of people who were prescribed hydroxychloroquine rather than only the number of prescriptions. Our findings highlight the additional burden for hospital eye services, and raise concerns about feasibility of guideline implementation, which have knock-on implications for prescribers.
INFLAMMATORY ARTHRITIS FOLLOWING IMMUNE CHECKPOINT INHIBITOR TREATMENT

Ruth Smith, James Maxwell
Royal Hallamshire Hospital

We present a case of inflammatory arthritis developing in a 61 year old lady after treatment with immune checkpoint inhibitors for metastatic ocular melanoma.

The lady was diagnosed with ocular melanoma in 2014 and underwent plaque radiotherapy. In 2016 she was found to have metastatic spread to her liver. She had a right hepatectomy and then radiofrequency ablation. In 2017 she developed further liver and new spinal metastases. She received palliative radiotherapy and was commenced on immunotherapy in the form of immune checkpoint inhibitors Nivolumab and Ipilimumab.

Shortly after her first cycle our patient developed pain and swelling across the small joints of her hands, wrists, knees, ankles and feet. Symptoms were worst in the mornings. They settled with 20mg prednisolone, but recurred on 10mg. She also developed hypothyroidism (TSH 50, fT4 2 TPO antibodies 359) and was commenced on thyroxine.

After her second cycle of immunotherapy, our patient developed a severe reaction with type 1 respiratory failure. She was admitted to ITU and as part of her treatment received high dose prednisolone (up to 120mg daily). This was gradually weaned down to 20mg. The immunotherapy was discontinued.

At her first Rheumatology review she reported ongoing joint pain, but there was no evidence of synovitis. CRP was normal. RF, ACCP, ANA, ENA, ANCA and immunoglobulins were normal. The prednisolone was weaned and the thyroxine was adjusted, as it was thought thyroid dysfunction was contributing to her joint symptoms. However, at 5mg prednisolone, her joint pain and stiffness worsened. Again there was little to find on examination, but CRP was elevated at 20. Prednisolone was increased to 30mg.

On review six weeks later, joint symptoms were ongoing and there was now evidence of synovitis. Thyroid function had improved (TSH 2.3, fT4 24.9). Sulfasalazine 1g BD was commenced. This was done in preference to Methotrexate, the use of which would bar her from entering future trials for cancer treatments. However, after three months, it did not settle her joints. Sulfasalazine was increased to 1.5g BD and hydroxychloroquine introduced. After a further month, she continued to have active synovitis with a DAS-28 score of 6.5. Following consultation with the Oncology team, Baracitinib was commenced. Her arthritis began to settle and within six months she was in remission, off steroids and hydroxychloroquine, and maintained on Baracitinib and Sulfasalazine 1g BD.

During this time there was progression in her metastatic disease with involvement of the liver, bones, lungs and subcutaneous tissues. She has been treated with a combination of Paclitaxel and Selumetinib and follow up imaging at six months has shown stabilisation of her malignancy.

We have had 2 other patients who have developed inflammatory arthritis after treatment with the immune checkpoint inhibitors Nivolumab and Ipilimumab; one for metastatic melanoma and one for metastatic clear cell carcinoma of the kidney. Both are ACCP negative but one is strongly RF positive. Both have been treated with methotrexate, one in combination with hydroxychloroquine. Outcomes are pending.

Immune checkpoint inhibitors (Ipilimumab, Nivolumab, Pembroliuzumab, Atezolizumab) are immunotherapies for solid tumours and haematological malignancies. They target checkpoint proteins (T lymphocyte-associated protein 4 CTLA4, Programmed cell death protein1 PD-1 and Programmed death ligand 1 PD-L1) on T cells thereby regulating T cell activity. T cell activity is up-regulated during times of infection. It is down-regulated when there is no infection, to maintain immune tolerance and prevent the
development of auto-immune and auto-inflammatory conditions. Cancer proteins interfere with this process by down-regulating T cells. This protects cancer cells from attack. The rationale of immune checkpoint inhibition is that it up-regulates T cell activity and allows attack of cancer cells. However, this up-regulation resets the balance away from maintenance of immune tolerance and tips the patient towards autoimmunity/inflammation. Any organ can be affected, but the most common manifestations are colitis, hypophysitis, pneumonitis, dermatitis and hyper/hypothyroidism. Rheumatological immune related adverse effects include inflammatory arthritis as in our patients, myositis, vasculitis and scleroderma. The incidence of inflammatory arthritis (including rheumatoid, reactive and seronegative spondyloarthritis-type patterns) in trial data is 1-7% and in case studies 3-5%. The onset varies from the first day of immunotherapy to 2 years later; median onset is 100 days post first immunotherapy. Typically RF, ACCP and HLA are not present; patients require unusually high doses of steroids (1-2mg/kg/day); and, in contrast to non-rheumatological immune related adverse effects, symptoms tend to persist after cessation of immunotherapy. Management includes withholding/cessation of immunotherapy, NSAIDs, prednisolone in doses up to 1mg/kg/day depending on the severity of the symptoms, DMARDs and anti-TNF.

References
COMPLEMENTARY AND ALTERNATIVE MEDICINE IN RHEUMATOLOGY: A SURVEY OF ITS USE FOR COMMON RHEUMATOLOGICAL CONDITIONS AMONG MULTI-ETHNIC PATIENTS IN LEICESTERSHIRE

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1. School of Medicine, University of Nottingham, Nottingham, UK
2. Department of Rheumatology, University Hospitals of Leicester NHS trust, Leicester, UK

Background: The use of complementary and alternative medicine (CAM) is common in patients with chronic disease.¹ However, the usage of CAMs among patients with common rheumatological conditions has been understudied. A significant proportion of primary care trusts are now providing therapies such as acupuncture and osteopathy to some of the 9 million users of CAMs in the United Kingdom (UK).² As the NHS serves a varied patient populace, it is important to appreciate the perceptions and utilisation of CAM amongst multi-ethnic groups. Furthermore, current trends in the uptake of the various CAM options are yet to fully explored both locally and regionally.

Objectives:
1. To identify the different types CAMs utilised- both therapies and products by Rheumatology patients.
2. To identify Rheumatology patients’ views towards the role and use of CAMs in managing their condition(s).
3. To identify locations where patients receive CAM and to determine patient’s spending practices.

Method: A cross-sectional survey on CAMs, and its use for common rheumatological conditions was conducted among multi-ethnic patients in Leicestershire, UK, through convenience sampling. The initial questionnaire was created by a multi-disciplinary input, with a patient-centred focus. Thereafter 10 questionnaires were piloted prior to formal data collection and revised accordingly. The data subsequently underwent statistical analyses.

Results: A total of 107 patients completed the survey over a 3-month period with a response rate of 90%. Most of the respondents (91.8 %) were over the age of 35 (age range 19 to 78 years, mean age 50.5±12.8SD). Among the respondents, 71 (66.4%) were women and 36 (33.6%) were men, while 72.9% were of white British or European ethnicity and 20.6% of South Asian ethnicity (17.8% Indian and 2.8% Pakistani). The majority of patients (66.4%) had rheumatoid arthritis (RA) followed by psoriatic arthritis (11.2%) and ankylosing spondylitis (4.7%). The respondent demographics were consistent with known epidemiology of common rheumatological conditions, with a higher prevalence among women than in men (female-to-male ratio of 3:1 in RA).

31.8% used CAM for managing symptoms related to their condition(s). Almost half of these respondents (41.2%) used CAM products and/or practices daily, with up to 64.7% spending between £10- £100. The majority of respondents (82.4%) received CAM therapy within the UK, followed by India (17.6%).

Commonly used CAM products include: ginger (35.3%), fish oil supplements (32.4%), turmeric (32.4%) and cannabidiol (CBD) oil (23.5%). The most common CAM therapies undertaken by the respondents were acupuncture (44.1%), yoga (14.7%), chiropractic (14.7%), meditation (2.9%) and stretch-fit (2.9%). Many respondents (64.7%) use more than one product and/or practice to manage their rheumatological condition(s).

60% of the respondents that used CAMs had RA. 9 out of 34 (26.5%) respondents found CAM therapies to be beneficial for their condition(s), with seven (20.6%) finding it to be useful for pain control/relief. Up to 17.8% of all respondents, including those with no prior experience of CAM, perceived potential benefits for treatment of their condition(s). However, 65.4% reported neutral views toward CAM.
Conclusions: In our local multi-ethnic population, it is evident that a notable proportion of patients have utilised CAM to supplement the management of their condition. Healthcare professionals need to be aware of the available CAMs particularly when informing and treating their patients. Effective communication is required in this area to maintain patient’s confidence and safety. Further qualitative research should consider the reasons for the use of CAMs.

References:

Disclosure of Interest: None declared.
GROUP EDUCATION FOR PATIENTS PRIOR TO BIOLOGIC AND SMALL MOLECULE DMARDs:
A QUALITY IMPROVEMENT PROJECT AT DUDLEY GROUP NHSFT

Introduction: The BSR recommend patient education when initiating biologic therapy, thus promoting self-management. A weekly group education session was introduced at the Dudley Group to compliment a new virtual biologic clinic (VBC) in September 2016 (patients had historically been educated during routine clinic appointments). All patients starting a biologic or small molecule DMARD (bDMARD) are required to attend a CNS led group patient education session, unless e.g. communication would preclude. The hour long session comprises of a presentation, discussion and Q&A. The presentation is standardised but constantly evolving: thus all patients are given the same up-to-date detailed information (therefore not dependant on a specific educator); a written copy is provided. Prescriptions are implemented once education has been completed. This ensures all patients receive education and identifies patients who do not wish to proceed with bDMARDs, avoiding drug waste. Since introduction >280 patients have attended these sessions. Patient relatives are encouraged to attend. We audited patient satisfaction of this quality improvement education session.

Method: A questionnaire was developed by the VBC team including: demographics; patient’s perception of the education session; whether it answered their questions/concerns about the drugs; the benefit of meeting other patients on a similar path. All patients attending between October and December 2017 (13 sessions) anonymously completed the questionnaire. The data was collated in excel and descriptive statistics used to analyse the responses. A excel database of all patients referred to the VBC was also interrogated.

Results: 36 patients completed the questionnaire (100% response rate). 75% of patients brought a relative to the session. 97% of patients were very satisfied with the education session. 97% of patients felt comfortable enough to ask questions. 89% of patients found it helpful to meet other patients. 97% believed all their questions were answered. 80% of patients did not feel they required additional information after the session. 83% of patients said they had received written copy of session. Patients attending provided generally positive feedback, citing the benefit of obtaining clear and educational information in a friendly atmosphere and also found great value in in meeting other patients in a similar situation. Since introduction 3 patients have DNA’d this session.

Conclusion/Discussion: Patient education is the cornerstone of patient-centred care, and is particularly important when starting patients on bDMARDs, given the potential serious side-effects and infection risk, as well as financial implications/drug wastage if treatment compliance is poor. This survey reflects the benefits perceived by patients from a standardised small group education session. The high level of satisfaction amongst patients is likely to increase compliance to biologic therapy. Standardised group delivery of education sessions may reduce costs and allow different healthcare professionals to deliver it.
THE BRITISH SOCIETY FOR RHEUMATOLOGY MULTI-CENTRE AUDIT OF THE MANAGEMENT OF ADULTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS


Background
The first UK guideline for the management of SLE in adults was published in 2017. We audited baseline compliance against standards from this guideline, NICE Technology Appraisal (Belimumab), and NHS England Commissioning Policy (Rituximab). The purpose was to support improvements in care and provide baseline data for future assessment of the guideline’s impact.

Methods
Rheumatology units in the Midlands, North-East and North-West of England were specifically invited to participate. BSR also invited its members via e-newsletter. Participating units retrospectively audited care at the preceding clinic visit of prevalent SLE cases attending during any 4-week period between February–June 2018. Data were collected using web-based survey software. Standards were decided a priori. The effect of clinic type (general v.s. dedicated CTD/vasculitis) and specialised status (defined by NHS England’s approval to prescribe belimumab, non-English units excluded from this analysis) were tested. Bonferroni’s correction was applied to the significance level.

Results
51 sites (England, Scotland, Wales, Northern Ireland) audited 1,021 visits, made by 1,003 patients, of median age 48 years (IQR 36-58). 49% of patients were receiving prednisolone, including 28.5% of patients deemed to have inactive disease. 16% of patients on maintenance prednisolone and inactive disease were on >7.5mg with 4% on >10mg daily. 72% of all patients were prescribed hydroxychloroquine, mycophenolate mofetil (23%), azathioprine (13%) and methotrexate (10%). 9% of patients had rituximab scheduled or administered within the past 12 months. 0.8% had received belimumab. 29% of patients were on no treatment. Of all SLE patient admissions in the past 12 months, 38% were for infection.

Table 1 shows compliance with audit standards.

Specific areas with low documented compliance (<60%) included:
- formal disease- activity assessment (even in moderate/severe active disease, a biologic-eligibility prerequisite);
- reducing drug-related risks (hydroxychloroquine ophthalmic monitoring and teratogenic drug pregnancy risks);
- protection against comorbidities and damage (immunisations, UV light, lipid screening)

Compared to general clinics, dedicated clinics had higher compliance with urine protein quantification (85.1% vs 78.1%, p =< 0.001) and recording blood pressure (94.5% vs 82% p =< 0.001). Specialised centres had higher compliance with BILAG-BR recruitment (89.4% vs 44.4%, p =< 0.001) and recording blood pressure (95.3% vs 84.1%, p = 0.001).

Conclusion
This audit has provided new insights into the characteristics of people with SLE attending clinics across the UK, highlighting the unmet need of better long-term control of disease activity, the need for a continued focus on steroid reduction and for newer therapies to enable this. It has demonstrated priority areas for improved care and guideline compliance, particularly related to assessing disease activity, reducing drug risks and protecting against major causes of death. Higher compliance with key standards for timely diagnosis of clinically silent nephritis in dedicated clinics indicates that wider adoption of this service-
delivery model may improve patient care. The variation in NHS England Policy compliance (BILAG-BR recruitment) reinforces the importance of all units contributing to outcome-research to secure continued access to high-cost drugs.

Table 1: Compliance with audit standards

<table>
<thead>
<tr>
<th>Clinical assessment</th>
<th>Number (%)</th>
<th>Proposed audit standard</th>
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<tr>
<td>(n = 1021 visits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriate urine protein quantification</td>
<td>843 (82.6%)</td>
<td>90%</td>
</tr>
<tr>
<td>Appropriate urine protein quantification if ever had lupus nephritis</td>
<td>242 (94.5%)</td>
<td>100%</td>
</tr>
<tr>
<td>Blood pressure measurement documented</td>
<td>930 (91.1%)</td>
<td>90%</td>
</tr>
<tr>
<td>eGFR measurement checked</td>
<td>950 (93.9%)</td>
<td>90%</td>
</tr>
<tr>
<td>Assessment of disease activity using BILAG / SLEDAI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In n=301 with active lupus</td>
<td>217 (21.3%)</td>
<td>90%</td>
</tr>
<tr>
<td>In moderately or severely active disease (n=119)</td>
<td>79 (26.3%)</td>
<td>100%</td>
</tr>
<tr>
<td>In people on biologics n=100 *</td>
<td>40 (33.6%)</td>
<td>100%</td>
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<tr>
<td>For patients on hydroxychloroquine or chloroquine, is there documentation of monitoring for eye disease in the last 12 months?</td>
<td>38 (38.0%)</td>
<td>100%</td>
</tr>
<tr>
<td>If the patient had Rituximab, are they enrolled in BILAG- BR?</td>
<td>59 (81.9%)</td>
<td>90%</td>
</tr>
<tr>
<td>If the patient had Belimumab, are they enrolled in BILAG- BR?</td>
<td>6 (75%)</td>
<td>90%</td>
</tr>
<tr>
<td>Lipid profile checked †</td>
<td>392 (39.0%)</td>
<td>80%</td>
</tr>
<tr>
<td>Advice to patient / GP of awareness of need for vaccinations?†</td>
<td>312 (32.7%)</td>
<td>80%</td>
</tr>
<tr>
<td>Discussion of UV protection with patient?‡</td>
<td>288 (30.3%)</td>
<td>80%</td>
</tr>
<tr>
<td>Smoking status recorded</td>
<td>613 (61.8%)</td>
<td>80%</td>
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<tr>
<td>Has a discussion on pregnancy issues been documented?‡</td>
<td>232 (48.3%)</td>
<td>80%</td>
</tr>
<tr>
<td>Discussion on pregnancy issues if on teratogenic medications (MMF or methotrexate) ‡</td>
<td>210 (43.8%)</td>
<td>80%</td>
</tr>
<tr>
<td>If inactive SLE but on prednisolone, dose of ≤7.5mg?</td>
<td>670 (84.0%)</td>
<td>90%</td>
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* including patients for whom a course of Rituximab is planned but not yet received
†There were ‘no records available’ for these screening questions at 1.6-6.7% of patient visits, and these are excluded from this analysis.
‡Only the 480 (47.0%) of the cohort who were female and of reproductive age were included in this analysis.
Urine quantification was defined as appropriate if the patient either had a urine dip that was negative or a trace of protein only, or showed ≥1+ protein and was sent for urine protein-quantification, or they were unable to provide urinalysis at that visit.
NEUROLOGICAL DYSFUNCTION IN PRIMARY SJOGREN’S SYNDROME

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¹. Department of Rheumatology, Royal Hallamshire Hospital, Sheffield University Teaching Hospitals NHS Foundation Trust, Sheffield, UK. ². Department of Neurology, Royal Hallamshire Hospital, Sheffield University Teaching Hospitals NHS foundation Trust, Sheffield, UK

Background-
Primary Sjogren’s syndrome (pSS) is characterised by sicca symptoms, supported by objective findings of xerophthalmia and xerostomia, in association with characteristic autoantibodies. There are many extra-glandular manifestations of pSS including inflammatory arthritis, cutaneous manifestations, interstitial lung disease, renal tubular acidosis, myositis, lymphoma and peripheral neuropathy (PN). The aim of this study is to describe the prevalence of neurological dysfunction and in particular PN in pSS.

Methods-
The study sample comprised 166 patients from the Department of Rheumatology, Sheffield Teaching Hospitals NHS Trust. All patients fulfilled the 2002 ACR-EULAR combined criteria for pSS. Patient information was obtained retrospectively from paper and electronic medical records between August 1st 2018 and December 3rd 2018. Data was collected on the following domains: demographics, glandular features, extra-glandular features and serological findings. Both clinical and electrophysiological data were collected to characterise the nature of PN in this sample. Electrophysiological studies were only conducted in patients that presented with features of PN.

Results-
The mean age was 61 years with mean age at diagnosis of pSS 51 years. 152/166 (92%) of patients were female and 84% were white British. Serological data included 156/166 (96%) of patients were anti-nuclear antibody positive, with 132/166 (80%) demonstrating a coarse speckled pattern; 146/166 (88%) anti-Ro antibody positive; 81/166 (49%) anti-La antibody positive; 68/166 (41%) had lymphopenia; and 108/166 (65%) had hypergammaglobulinemia. Extra-glandular features were as follows: 7/166 (4%) had interstitial lung disease; 5/166 (3%) had renal tubular acidosis; 1/166 (<1%) had myositis; and 5/166 (3%) had been diagnosed with non-Hodgkin’s lymphoma. Neurological symptoms were found in 96/166 (58%) of patients. The nature of the clinical neurological features in this sample are summarised in table 1, with the most common being paraesthesia (25%) and ataxia/ poor balance (12%). Nerve conduction studies were conducted in 65 patients that complained of sensory symptoms. In 36/65 (55%) these were normal. Sensorimotor axonal neuropathy was found in 11/65 (17%) and 8/65 (12%) of patients were found to have sensory ganglionopathy. Furthermore, 10/65 (15%) of patients were found to have carpal tunnel syndrome (CTS) or entrapment neuropathy.

Conclusion-
In this large sample of patients with pSS, neurological manifestations were common. The most common neurological clinical features were paraesthesia and ataxia. Nerve conduction studies demonstrated sensorimotor axonal neuropathy to be the most prevalent pathology followed by sensory ganglionopathy. As not all patients were assessed neurologically we believe that these figures may be an underestimate of the frequency of neurological dysfunction in pSS.
### Table 1. Clinical neurological manifestations

<table>
<thead>
<tr>
<th>Manifestation</th>
<th>Present, n (%)</th>
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<tbody>
<tr>
<td>Any neurological manifestation</td>
<td>96 (58)</td>
</tr>
<tr>
<td>Paraesthesia</td>
<td>42 (25)</td>
</tr>
<tr>
<td>Ataxia/ poor balance</td>
<td>20 (12)</td>
</tr>
<tr>
<td>Migraine/ headache</td>
<td>9 (5)</td>
</tr>
<tr>
<td>Numbness</td>
<td>9 (5)</td>
</tr>
<tr>
<td>Carpal tunnel syndrome</td>
<td>7 (4)</td>
</tr>
<tr>
<td>Burning/ neuralgia</td>
<td>6 (4)</td>
</tr>
<tr>
<td>Weakness</td>
<td>4 (2)</td>
</tr>
<tr>
<td>Myoclonus</td>
<td>4 (2)</td>
</tr>
<tr>
<td>Trigeminal neuralgia</td>
<td>2 (1)</td>
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</tbody>
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THE TEMPORAL RELATIONSHIP BETWEEN UVEITIS AND SPONDYLOARTHRITIS DIAGNOSES AND ITS EFFECT ON EXPOSURE TO TREATMENT: RESULTS FROM A REAL LIFE SINGLE CENTER SPA COHORT ANALYSIS

C. Koutsianas, K.W.A.S. Thilakarathne, A.V. Pace
Department of Rheumatology, The Dudley Group NHS Foundation Trust

Background: Inflammatory eye disease (IED) is one of the most common extra-articular manifestations in spondyloarthritis (SpA) with a prevalence ranging from 2 to 33% depending on SpA subtype and HLA-B27 positivity. The vast majority of cases present as acute anterior uveitis (AAU). The temporal relationship between the development of IED and the diagnosis of SpA may vary significantly.

Objective: To audit the demographics and clinical characteristics of SpA patients with a diagnosis of IED and the temporal relationship between these two diagnoses.

Methods: For this retrospective single center study, we examined the hospital records and investigations of patients attending our Department’s specialized Spondyloarthritis clinic and fulfilling the ASAS classification criteria for SpA to identify cases of IED. Data was captured on a pre-defined Excel spreadsheet and analysed with IBM SPSS v23.

Results: Among 378 case records, 60 (15.9%) patients with a history of IED were identified. The mean (±SD) age of the cohort population was 55.3(±12.8) years, the majority were male (73.7%), HLA-B27 positive (86.7%) and non-smokers (57.4%). The median (IQR) delay in SpA diagnosis from SpA symptom onset was 8 (10.68) years. The pattern of SpA was predominantly axial and axial with peripheral involvement (70 and 28.3% respectively) and in most cases radiological sacroilitis was bilateral (72.4%). Uveitis was the only extra-articular manifestation in 35/60 patients (58.3%); the rest also had a history of co-existent enthesitis (25%), psoriasis (10%) and inflammatory bowel disease (6.7%). AAU was diagnosed in all of the identified cases and 74.6% had recurrent attacks, while in the rest only a single episode had been documented. 90% of patients had treatment exposure to NSAIDs, 46.7% to biologic DMARDs and only 30% to synthetic DMARDs.

We further looked into the temporal relationship between the AAU and SpA diagnoses. AAU was diagnosed before SpA in 54.7% of cases. The median (IQR) time between diagnoses of AAU and SpA was 8 (13) years if the diagnosis of SpA came first, which was longer than the median (IQR) time of 5 (5) years observed when AAU was diagnosed first, although this difference did not reach statistical significance (p=0.298). When AAU was diagnosed in established SpA, patients were more likely to have been exposed to synthetic DMARD (45.8% vs 17.2%, p=0.025) and biologic DMARD (58.3% vs 37.9%, p=0.114) treatment.

Conclusion: 15.9% of patients in this real life SpA cohort had IED, which was predominantly acute, anterior and recurrent uveitis. The time between SpA and AAU diagnoses was longer when SpA diagnosis was preceding that of AAU and those patients were more likely to receive synthetic and biologic DMARDs. A plausible explanation could be that they were already under rheumatological care.

References:
CARDIOVASCULAR RISK FACTORS IN PATIENTS WITH RHEUMATOID ARTHRITIS: RESULTS FROM A CROSS-SECTIONAL SINGLE CENTER SURVEY

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Background: Rheumatoid Arthritis (RA) patients have increased cardiovascular (CV) mortality and morbidity compared to the general population. This is only partly explained by the presence of traditional risk factors and systemic inflammation and treatment effects seem to be implicated. Growing awareness of this increased CV risk has led to several efforts to identify the underlying mechanisms, but also to guide its management. The EULAR recommendations on CV disease risk management suggest regular screening for modifiable CV risk factors and careful use of NSAIDs and corticosteroids in accordance with treatment specific guidelines.

Aim: To evaluate demographics, disease characteristics, cardiovascular risk factors and treatments in Rheumatoid Arthritis (RA) patients reviewed in the Rheumatology Department of The Dudley NHS Foundation Trust.

Methods: We conducted a cross-sectional survey study between July 2018 and February 2019 as part of an international audit of risk factor recording and control in subjects with RA (SURF-RA). Physicians and clinical nurse specialists were asked to capture data on a pre-defined form when reviewing RA patients in the Early Arthritis clinic and general follow-up clinics. Data was then collected on Microsoft Excel and analysed with IBM SPSS v23.

Results: 130 patients were recruited in the above period. 91 (70%) were female, 123 (94.6%) were White, the mean (±SD) age was 65 (± 14.8) years and the median (IQR) disease duration was 4 (11) years. The majority of the patients (110/130, 84.6%) were RF and/or anti-CCP positive and had a median (IQR) DAS28-ESR of 3.12 (2.1). 53.5% of the patients were either in remission or had low disease activity, as defined by DAS28-ESR. More than two thirds were either current (17.7%) or previous (43.8%) smokers. One third of the patients stated that they engaged into less that moderate physical activity, defined as walking or equivalent activity for 30 minutes at a frequency of 3-5 times/week.

67.7% of patients were on Methotrexate, while 50.8% were on other conventional DMARDs. 15.4% were on concurrent prednisolone and 21.5% were using biologic DMARDs. 21.5% were on regular NSAID use. Disease activity was significantly lower in patients using bDMARDs (p=0.011), but disease remission did not relate to NSAID (p=0.125) or prednisolone (p=0.401) use.

The most frequent CV co-morbidities were hyperlipidaemia (37%), hypertension (35%), type 2 diabetes mellitus (9%) and coronary arterial disease (7%). The mean patient BMI (±SD) was 28.7 (±5.8) and mean waist circumference (WC) 99.3 (±5.8) cm, while 34% of patients were considered obese (BMI>30). The percentage of central obesity (WC>102cm in men and WC>88cm in women) was quite high at 64.4%. More than half of the patients (55.4%) had their lipid panel checked within the previous 12 months.

Conclusions: The prevalence of CV risk factors in RA patients remains high. It is encouraging to see that, with growing awareness, modifiable CV risk factors are being assessed. Use of NSAIDs and corticosteroids in this at risk cohort of patients is high, even though disease remission rates did not associate with their use.

References:
Posters
THE NON-PHARMACOLOGICAL MANAGEMENT OF PATIENTS WITH NEW ONSET RHEUMATOID ARTHRITIS (RA) IN ACCORDANCE WITH NICE GUIDANCE (NG100)

Syed Husain, 4th Year Medical Student, University of Birmingham.
Dr Ravinder Sandhu, Consultant Rheumatologist, Dudley Group NHS Foundation Trust

Introduction: RA is a chronic inflammatory arthropathy affecting approximately 400,000 people in the UK. It can lead to erosive joint damage and lead to significant disability. Early intervention with DMARDs has been shown to improve patient outcomes. However, successful treatment of RA is dependent upon a multidisciplinary team approach which is required to effectively care for the individual patient needs. Therapy services play a vital role, particularly in assessing and managing the functional impact of RA on the patient. NICE guidance recommends that all patients with RA are referred to Physiotherapy and those with problems with hand function or their everyday activities should be referred to Occupational Therapy.

Aims/Objectives:
1) To identify how functional ability was measured to provide a baseline for assessing the functional response to treatment e.g. using a Health Assessment Questionnaire (HAQ) score as recommended by NG100 (1.1.5).
2) To assess the documentation of referral of RA patients to Physiotherapy and Occupational therapy in accordance with NG100 (1.8.1 and 1.8.2).

Methods: All patients with confirmed RA attending the Early Inflammatory Arthritis (EIA) clinic in November 2018 were selected. Clinic letters of their initial rheumatology visit and baseline visit to the EIA clinic were assessed against a pre-designed proforma. Data on duration of symptoms, disease activity, serology and documentation of functional impairment were recorded in addition to referral to appropriate therapy services in accordance with NICE guidance.

Results: Data was collected from 42 patients with a confirmed diagnosis of RA. 83.3% were seropositive and 78% were anti-CCP antibody positive. The median time from symptom onset to presentation at the Rheumatology clinic was 6 months. DAS28 score was recorded at either first rheumatology clinic or baseline EIA clinic visit in 78.6% of patients. The mean DAS28 score measurement was 4.92. The presence of pain or swelling affecting the small joints of the hands or wrists was recorded in 98% of clinic letters. Functional limitation including reduced range of joint movement, poor grip strength, difficulty in walking and problems with specific activities of daily living (ADL) were recorded in 74% of clinic letters. Of these 6.5% were documented as having no functional limitation. Specific difficulties in ADLs or problems with hand function were recorded in 57%. Of these, 4.2% had no difficulties in their hand function or ADLs. HAQ score was recorded in 5% of clinic letters. 61.9% of patients had documented referral to Physiotherapy and 48% had documented referral to Occupational therapy. There was no documentation of referral to any member of the therapy services in 28.5% of patients.

Conclusion: This data shows that documentation of disease activity or joint pain and swelling was recorded in the majority of clinic letters. However, functional ability measurement using a validated score such as the HAQ was rarely documented. Documentation of difficulties in specific activities of daily living was recorded in just over half of patients. Over a quarter of patients with a new diagnosis of RA had no documented referral to therapy services. The use of HAQ scores in practice would provide a validated means to assess functional ability and highlight the need to involve therapy services. Our aim, as a result of this audit, is to implement the use of the HAQ and better document referral to therapy services.
DO RHEUMATOLOGISTS PROVIDE AND DOCUMENT SUFFICIENT INFORMATION WHEN COMMENCING A PATIENT ON DISEASE MODIFYING ANTI-RHEUMATIC DRUGS?

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Background

Commencing patients on conventional DMARDs is an everyday task within every rheumatology department. Providing patients with sufficient information regarding these medications is an essential part of the informed consent process. This often takes the form of a verbal discussion and a generic booklet (with the presumption they will read it). However, documentation of this process can be inconsistent. A coroners’ review prompted change. The patient, who was until recently on methotrexate, died of a chest infection, with underlying fibrotic changes on chest x-ray. The family did not recollect verbal or written information about methotrexate-related side effects and indeed there was no clear documentation. As such we wanted to investigate whether we were providing and documenting sufficient information when commencing a patient on DMARDs.

Methods

We created a 7 point standard against which we would compare clinic letters to. This included documentation of the name, dose and frequency of the medication to be started, blood monitoring requirements, that possible side effects were discussed, instructions of what to do with the medication if the patient becomes unwell, advice regarding fertility where appropriate, providing the helpline number and stating that an information booklet was given. We then undertook a retrospective clinic letter review via our rheumatology letter database looking for documentation against our aforementioned standard. We randomly selected 50 patients who had been commenced on DMARDs between August 2016 and October 2017.

We subsequently created DMARD information tables that could be added to any clinic letter when a DMARD was commenced. Each table is DMARD-specific and contains the name of the medication, dose, common side effects, nature of the blood monitoring required, what a patient should do during infection/illness, pregnancy advice and additional comments including our helpline number. A copy of this clinic letter would then be sent to the patient, the GP and filed in the hospital records.

These tables were implemented in January 2018. We subsequently performed a snapshot letter review of 20 randomly selected letters between the January and March 2018.

Results

In the initial baseline cohort (n=50), patients were commencing methotrexate, sulphasalazine and hydroxychloroquine. Against our 7 point standard, the average letter scored 69%. Notably, only 12 (24%) of letters documented advice of what to do if unwell and only 14 (28%) letters documented any discussion regarding fertility. Cycle 2 cohort (N=20) followed the implementation of the DMARD information tables. All 20 letters used the new DMARD tables. This meant that all 20 letters documented all 7 aspects as per the standard.

Conclusion

The implementation of new DMARD information tables has helped to improve and standardise the documentation for patients being commenced on DMARD therapy. However, documentation needs to complement an appropriate verbal discussion with the patient in clinic.

Word count 451 words
HIDING IN PLAIN SIGHT: HYPOADRENALISM MASQUERADING AS FIBROMYALGIA
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Introduction
Fibromyalgia has many diagnostic pitfalls. It can often mask or coexist with other conditions. We present here a patient referred to the rheumatology service with symptoms typical of fibromyalgia. On further investigation, however, she was found to have hypoadrenalism. Oral steroids led to an improvement in her symptoms.

Case
A 47-year old lady with a history of irritable bowel syndrome and asthma presented to the rheumatology clinic with a six-year history of widespread pain and stiffness, lethargy, poor sleep, headaches and depression. She also reported early satiety, regurgitation of food and weight loss of five kilograms over eight months. Regular medications included buprenorphine patches and inhaled beclometasone dipropionate twice daily for her asthma. On further questioning, she felt dizziness on standing. She has a 20 pack year smoking history and consumes no alcohol. She had to discontinue her work as a customer services manager several years ago on account of her symptoms.

On examination, she was cachectic. There was widespread tenderness but no clinically detectable synovitis or stigmata of connective tissue disease. There was no pigmentation of the skin. Abdominal examination revealed epigastric tenderness but no abdominopelvic masses or lymphadenopathy. On neurological examination, there was truncal and peripheral muscle weakness. Reflexes were present, and sensation and co-ordination were normal. There was no discrepancy in lying and standing blood pressures.

The biochemistry laboratory contacted the on-call doctor to notify them that the random cortisol level was 50nmol/L. Further testing showed that the ACTH was non-elevated at 7ng/L. Her 30-minute cortisol after synacthen rose from 131 to 347nmol/L (insufficient response). Inflammatory markers, blood borne viruses, immunology profile, creatine kinase and thyroid function were normal, as were her remaining pituitary function tests. The patient was also found to be vitamin D deficient. Abdominal ultrasound was normal. Barium swallow revealed oesophageal dysmotility. Owing to claustrophobia, she was unable to undergo a CT scan.

A three-month trial of oral hydrocortisone led to an improvement in her symptoms. The endocrinology team felt that her steroid axis was likely reduced because of either inhaled steroids or opiates. This case underscores the importance of excluding hypoadrenalism in patients presenting with suspected fibromyalgia.

Discussion
Adrenal insufficiency has been shown to occur in patients receiving long term inhaled steroids1, as well as patients on long term opiate analgesia2. These factors may have suppressed the steroid axis in our patient. This is confirmed by the insufficient adrenal response to synacthen. Primary hypoadrenalism is excluded as the ACTH is non-elevated.

There is an overlap in the clinical presentations of fibromyalgia and hypoadrenalism. Although both conditions can present with lethargy, muscle aches and memory disturbances, features such as weight loss, vomiting, orthostatic hypotension and hypoglycaemia should prompt clinicians to investigate for hypoadrenalism3.

Interestingly, some studies have shown abnormalities in the hypothalamic-pituitary-adrenal axis in patients with fibromyalgia4, possibly as a CNS adjustment to chronic pain and stress. Demitrack and Crofford established that impaired activation of the steroid axis is an essential feature of this condition5. A proposed
mechanism is deficient serotonergic activity leading to reduced steroid axis activity\(^6\). It remains unclear whether the attendant hypoadrenalism contributes to the symptoms of fibromyalgia or whether it is an epiphenomenon.

**Conclusion**

Hypoadrenalism should be suspected in patients with clinical features of fibromyalgia as the symptoms can be steroid responsive.

**References**

EVALUATION OF THE GCA SERVICE AT NORTHAMPTON GENERAL HOSPITAL, AND A STUDY OF TEMPORAL ARTERY BIOPSY LENGTH AND ITS CORRELATION WITH POSITIVITY

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Dr Fahad-Bin Zahid (Core Medical Trainee)

Abstract

Background: Giant Cell arteritis (GCA) is one of the commonest vasculitidies, with an incidence in the UK of 2.2/10000 patients years, affecting those more than 50 years. BSR guidelines recommend urgent specialist referral for patients with suspected GCA. Temporal artery biopsy (TAB) should be considered in all patients with GCA. TAB should be done within 1 week of commencing steroid. BSRF recommend TAB length of at least 10mm.

Objectives:
1. Time to see new suspected GCA patients by Rheumatologist at Northampton General Hospital (NGH).
2. Time to TAB by NGH
3. Temporal Artery Biopsy Length and its correlation with positivity.

Method: Referral letters were examined from the period January 2018 to January 2019. Details of the biopsy sample were accessed via result reporting system.

Results: 98 patients were referred over a period of 12 months. Referral from both Ophthalmology and non-ophthalmology took an average of 1.4 weekdays seen at Rheumatology. For the patients who had TAB, the average time from referral to biopsy was 4.68 days (including weekends). Total 35 Temporal Artery Biopsies were done. (Non-arterial samples were excluded from this data).

Discussion: Owing to the segmental nature of the disease process, sufficient specimen length is important for an accurate diagnosis in GCA. Studies have shown the greater the length of artery that can be taken, the higher the likelihood of biopsy result being positive. Above data shows that the median and mean biopsy length is higher in the cohort patient with positive biopsies. It also shows more than 5mm biopsy length had the highest positivity.

Conclusion: Time of specialist Input after referral, and the time of TAB with suspected GCA were prompt which falls within the BSR recommendation. TAB length are, on average, falling short of the BSR target. This may be impacting on the positive and negative biopsies. Further study could focus on temporal artery biopsy length and the process of obtaining it.
A SINGLE CENTRE AUDIT OF THE BSR AND BHPR GUIDELINE FOR THE PRESCRIPTION AND MONITORING OF NON-BIOLOGIC DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS

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Introduction: Rheumatoid arthritis (RA) is a common disabling autoimmune disease primarily affecting synovial joints, with systemic manifestations. Early and aggressive treatment with disease-modifying anti-rheumatic drugs (DMARDs) significantly increases the chance of remission, preventing disabling joint damage. However, DMARDs are also associated with significant adverse effects, thus patients require careful pre-treatment screening and monitoring to prevent harm. British Society of Rheumatology (BSR) published an updated standards for the initiation and monitoring for DMARDs in 2017, including methotrexate (MTX) and hydroxychloroquine (HCQ), which are used first line either alone or in combination in newly diagnosed RA (1). The aim of this audit was to compare the current practice with the BSR recommendation as the audit standard.

Methods: In the first cycle of the audit, 31 patients’ records attending outpatient rheumatology department at the Queen Elizabeth Hospital, Birmingham, between April 2017 and May 2018, who were initiated on MTX +/- HCQ were reviewed. The audit will be repeated in June 2019 to assess whether compliance with the guidelines has improved. Current practice was assessed against the 27 recommendations.

Results: 31 patients (26 female, 5 male), median age 55 (interquartile range 50.8-67.3 years), were included in the analysis: 58.1% on MTX only, and 41.9% on MTX and HCQ. 96.8% of patients had education on side effects, 86.7% of patients of child-bearing age received education on contraception and 96.8% were advised to avoid live vaccines. Baseline height, weight, blood pressure and blood tests (haematology, renal and liver function tests) were recorded in 90.3%, 100%, 96.8% and 100% of patients respectively, and 58.1% patients had blood-borne virus (BBV) screening (hepatitis B & C and HIV). All patients were screened for cardiorespiratory, gastrointestinal or hepatorenal diseases co-morbidities that may affect response and/or be a contra-indication to treatment. Contrastingly, only 59.4% a baseline chest examination documented, though 100% underwent imaging [CXR (93.8%) or CT thorax (6.2%)] and 100% high risk patients underwent tuberculosis screening.

72.7% of patients on HCQ were asked to see an optician, and only 2 (18.2%) were referred to an ophthalmologist for baseline optical coherence tomography (OCT), although some patients had only just started HCQ at the time of audit. Appropriate blood tests were requested for 90.3% of patients on MTX, however 30.4% of patients did not have their monitoring tests at the intended time.

As a result of this audit, we designed a new checklist, designed to assist clinicians to follow the BSR guidelines, and to improve data collection for audit and quality assurance purposes. The impact of our intervention will be assessed in the second audit cycle (June 2019).

Conclusions: Overall, over 80% compliance in 19/27 points in the guidelines was achieved. However, some areas for improvement were identified, including clearer documentation of baseline chest examination and advising patients to avoid smoking and alcohol. There was also variation in the use of BBV screening. Finally, all patients commenced on HCQ should be referred to an ophthalmologist for a baseline OCT within the first year. We now plan to re-audit in June 2019 to assess the impact of our new MTX counselling and initiation checklist.

WARNING: STATIN INDUCED AUTOIMMUNE NECROTISING MYOSITIS - A CASE SERIES
Muhamad Jasim, Jafar Ibrahim, William Scotton, Francesco Manfredonia, Margaret Timmons, Nick Barkham
New Cross Hospital, Wolverhampton

Introduction:
Statins are frequently prescribed, following or in order to prevent cardiovascular events. They inhibit 3-hydroxy-3-methylglutaryl coenzyme A reductase (HMGCoA), an enzyme involved in cholesterol synthesis. Up to 20% of patient experience myalgias which resolve after the drug is stopped. We highlight a more serious and potentially life threatening complication, statin-induced autoimmune necrotising myositis (SIANM). Recently SIANM has been differentiated from inflammatory polymyositis. Patients present with bilateral proximal muscle weakness, elevated creatinine kinase, a muscle biopsy with necrosis and a positive HMGCoA reductase antibody. The latter, has been found to be a very specific and sensitive investigation for SIANM. Given its rarity, 1 in 100,000 patients, there are no guidelines available to recommend the best course of treatment for such patients.

Cases
Case 1: A 72 year old man with hypercholesterolaemia, type 2 diabetes and hypertension presented with progressive proximal symmetrical weakness for 6 months. He started 20mg atorvastatin a year earlier and stopped this 2 months before admission. Examination revealed 4/5 muscle strength proximally in all 4 limbs and the patient struggled to stand from sitting. CK was elevated at 8223 IU/L (30-200). EMG confirmed a myopathic process and MRI thighs showed active inflammation. A muscle biopsy and HMGCoA antibodies confirmed SIANM and the patient commenced IV and then oral steroids. The patient deteriorated rapidly over the subsequent days with progressive weakness and dysphonia. He developed bilateral pneumonias and was admitted to ITU. Here we commenced the patient on IV immunoglobulin (IVIG) and rituximab. With this treatment has improved significantly, with increasing power and a normalised CK 93.

Case 2: A 55yr old man with a background of previous MI in 2013 (after which he was started on atorvastatin 40mg), type 2 diabetes, high BMI, hypercholesterolemia and hypertension presented with 6 month progressive bilateral proximal muscle weakness that meant he struggled to get in a car. Serum CK found to be 8413, his statin was stopped and the patient underwent extensive investigation by both neurology and rheumatology teams. Once again MRI thighs, EMGs, muscle biopsy and HMGCoA antibodies confirmed the diagnosis of SIANM. The patient was commenced IV then oral steroids and despite slight improvement in his power initially, this soon plateaued as did his CK. He was commenced on IVIG and methotrexate and has found significant benefit with these treatments.

Conclusion
Patients presenting on statins with proximal symmetrical weakness and a raised CK should have HMGCoA antibodies checked. Though statins should always be stopped, patients with SIANM can continue to deteriorate despite drug discontinuation and steroid treatment. Such patients should be considered for immunosuppression. The 2 cases described show positive response to a combination of IVIG, methotrexate and/or rituximab. This seems to mirror the growing clinical experience in other published case reports.
CASE REPORT: SUCCESSFUL TREATMENT WITH RITUXIMAB FOR RHEUMATOID ARTHRITIS IN A PATIENT WITH ADVANCED NEUROENDOCRINE CANCER

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Background: Treatment of Rheumatoid arthritis (RA) in patients with concomitant malignancy poses a difficult challenge. There is not enough evidence on treatment in such a situation and it needs to be individualised. Here, we present a case of RA, with a background of advanced neuroendocrine cancer, successfully treated with Rituximab.

Case: A 50 year old female, with a background of Stage IV neuroendocrine cancer for which she completed chemotherapy in June 2016, currently on monthly injections of octreotide and denosumab, presented with a symmetric polyarthritis. She was started on oral prednisolone 30 mg/day by another rheumatology unit in November 2017. She was not given any DMARD treatment because of her neuroendocrine cancer. When referred to our clinic for a second opinion by her GP in February 2018, she was still on prednisolone 20 mg/day without relief in her symptoms, however she had developed side effects of steroids like 'moon face'. Her quality of life was significantly impaired by joint symptoms. She had active arthritis with SJC-22/28, TJC-22/28, patient global VAS-60/100, ESR-18 mm/hr and DAS28 of 6.8. She was sero-positive for RF and ACPA with negative hepatitis serology and T-spot along with normal chest X-ray. Given her expected life expectancy of ~2.5 years, the possibility of methotrexate interfering with her chemotherapy because of risk of myelosuppression and her high disease activity (DAS28-6.8), we felt it appropriate to start her on first line biologic treatment. Anti TNF drugs are controversial in patients with concomitant malignancy, as there is some evidence of increased risk of non-melanoma skin cancer with anti-TNF drugs. Rituximab (Anti CD20 monoclonal antibody) is an effective therapy for RA and is used for treatment of lymphomas, with no evidence of recurrence in patients with prior solid organ malignancies. We felt Rituximab to be a better agent in this unusual scenario, and consulted with her Oncology team who concurred. After our discussion with the patient about the potential risks and benefits, she decided to go ahead with that. After getting necessary permissions from Clinical Commissioning Group (CCG) for funding, she received 2 infusions of Rituximab 1 gm in July 2018. On review 5 months after receiving Rituximab infusions, she feels much better with patient global- 50/100, TJC-2/28, SJC-2/28, ESR-10 mm/hr and DAS28 of 3.50, down from earlier 6.80. Moreover, she has completely come off her oral steroids slowly over this period. She had 1 episode of urinary tract infection treated successfully with oral antibiotics. She is planned for her next infusion of Rituximab, because she complained of wearing of effect of last infusion over previous couple of weeks.

Conclusion: Rituximab is an attractive option as a first line agent for treatment of Rheumatoid Arthritis in patients with concomitant malignancy. Such patients do not always fit neatly into guidelines, and treatment needs to be individualised.

References:
A CASE REPORT: "RAYNAUD’S PHENOMENON" - A LATE CLUE TO A HIDDEN DIAGNOSIS
Taylor MJ, Barkham N, Sapkota H

Background: Giant cell arteritis (GCA) is the most common form of vasculitis, which occurs typically in adults aged 50 or older (1). GCA usually presents with temporal headache, pain and stiffness of neck and shoulders and visual symptoms, including blindness (2, 3). In the absence of typical symptoms, it is difficult to diagnose GCA, meaning that it can be missed, or symptoms attributed to another diagnosis. We report a case of GCA where the diagnosis was established late, after the patient developed Raynaud’s phenomenon.

CASE PRESENTATION: A 64-year-old woman was referred to the rheumatology clinic with a five-month history of joint pains and stiffness, principally affecting the neck and arms and raised ESR of 28 and CRP of 44. After careful assessment, a mild form of polymyalgia-rheumatica (PMR) was suspected. The patient was given intramuscular Depo-Medrone and she was managing well on NSAID therapy.

In a review clinic, she complained of cervical spine pain atypical of PMR, so CT of the cervical spine was requested which demonstrated erosions of the atlanto-dental articulation. She had right knee swelling, which was aspirated to reveal unremarkable cytology. As she had no headache or visual symptoms (4), and had palpable temporal arteries bilaterally, a vasculitis was considered unlikely. Based on imaging findings, raised CRP/ESR and right knee swelling, a working diagnosis of seronegative rheumatoid arthritis was made and the patient was commenced on sulfasalazine but discontinued shortly after due to intolerance. She continued with NSAIDs alone as the diagnosis was still unclear, symptoms were now intermittent and CRP was only 12.

One year later, she presented with debilitating fatigue, arthralgia but also claudication of both arms and, for the first time, Raynaud's phenomenon, but had experienced no headaches. Owing to markedly raised CRP of 115 and ESR of 81, and significantly reduced radial pulses, she was referred for MR angiography of the aorta and aortic arch; however this revealed no significant pathology. Doppler studies demonstrated reduced flow in her subclavian and axillary arteries, disease affecting her right radial artery and no perfusion in her ulnar arteries. A diagnosis of vasculitis was now clinically suspected. Subsequent PET-CT demonstrated a significant inflammatory lesion affecting her left subclavian artery and MR angiography of her subclavian and axillary arteries revealed typical features of large vessel vasculitis. She was commenced on high dose steroid and methotrexate, which produced remarkable improvement of her symptoms and normalisation of inflammatory markers.

Conclusion: Large vessel vasculitis (GCA) can be difficult to diagnose, especially in the presence of other, co-existing disease and in the absence of temporal headache. GCA, PMR and RA share predisposing genetic, environmental and hormonal factors so it is perhaps unsurprising if these diseases were to occur simultaneously or consecutively in the same patient and this has been reported previously (5). In adult patients with raised inflammatory markers and constitutional symptoms without (even with) an obvious alternative diagnoses, large vessel vasculitis should be considered.

Our case supports the utility of PET-CT scanning in the diagnosis in these circumstances.

References
AN AUDIT OF FRACTURE PROPHYLAXIS IN A GERIATRIC INPATIENT POPULATION
Ashley Hawarden (Core Medical Trainee), Janet Proctor (Senior Staff Nurse), Nicky Dale (Clinical Nurse Specialist), Zoe Paskins (Senior Lecturer and Honorary Consultant Rheumatologist)

Introduction:
Annually, in the United Kingdom, there are approximately 500,000 fragility fractures, many of which are preventable. National Institute for Health and Excellence (NICE) quality standards for osteoporosis recommend that patients with fragility fractures have fracture risk assessed, and those at high risk commence appropriate treatment. Patients aged over 75 with prior fragility fracture may be started on treatment empirically without the need for bone density scanning. The Royal Osteoporosis Society Clinical Standards for Fracture Liaison Services stress the importance of systematically identifying inpatients with fractures and treating them or referring to appropriate services as required. This audit sought to determine if in-patients at high risk of fragility fracture were receiving appropriate bone prophylaxis.

Methods:
All inpatients on three geriatric wards at the University Hospital of North Midlands were included in the audit. Electronic records were reviewed to identify patients who had sustained a radiologically confirmed insufficiency fracture within the last five years. The medicines reconciliation and inpatient prescription chart of identified patients were assessed to determine if bone prophylaxis was prescribed. Electronic letters were reviewed to establish if any referral to secondary care had been made.

Results:
A total of 68 patients (42 (62%) female) were included in the audit. The mean age was 86 years (range 72 to 101). 33 (49%) patients had sustained at least one radiologically confirmed fracture within the past five years. 7 (21%) of these patients were prescribed an oral bisphosphonate and a further 9 (27%) were prescribed vitamin D and/or calcium replacement only. 17 (52%) patients were prescribed no bone prophylaxis at all. There was no evidence of any patients being referred to secondary care for bone protection.

Discussion:
The findings of this audit suggest greater than 75% of an inpatient population at risk were undertreated; however, the management of osteoporosis may not always be seen as an acute priority in the inpatient setting. As a result of the findings, rheumatology and elderly care specialities are working together to introduce case-finding strategies for the local Fracture Liaison Service to identify and assess inpatients with a history of fragility fracture.
JOINT SYMPTOMS AND THE BRACHYDACTYLY SYNDROMES: AN INFLAMMATORY MIMIC
McElhinney L, Bell C, Mitchell L, Pace A V

Background
Brachydactyly describes disproportionate shortening of the fingers and toes. It can be an isolated finding or can be part of a syndrome. There are 11 recognised sub-types of isolated brachydactyly, which are typically autosomal dominant. There are numerous syndromes associated with brachydactyly, with varying clinical features. One such syndrome is Feingold’s syndrome, an autosomal dominant condition causing defects in the MYCN transcription factor. Hand and feet abnormalities are common (80-90%) and can manifest as brachymesophalangia (abnormal shortening of the middle phalanges) of the 2nd and 5th digits, clinodactyly, brachydactyly, or syndactyly. Other characteristics include microcephaly, shortened palpebral fissures, duodenal or oesophageal atresia, and rarely vertebral, cardiac or renal abnormalities. Here we describe 2 patients presenting with joint pain associated with brachydactyly and their management.

Patient 1
A 22 year old man presented with several years of progressive flexion and stiffness in the hands, lower back pain and morning stiffness. A systematic enquiry was unremarkable. He worked as a fork-lift operator, was otherwise fit and well with no history of developmental delay or childhood illness, or relevant family history.

Examination revealed prominent PIPJ’s and indistinguishable proximal and distal interphalangeal joints in the index and little fingers bilaterally; the little fingers also showed a single crease. There was mild thoracic kyphosis with restriction, but the rest of musculoskeletal and general systemic examination was unremarkable.

Blood tests including HLA B27, anti-CCP, and rheumatoid factor were normal / negative. Plain radiograph showed shortening of the middle phalanges, most marked in the 2nd and 5th phalanges bilaterally. The thoracic spine x-ray demonstrated widened and rectangular exaggeration of vertebral bodies; there was no radiographic sacroiliitis. MRI with STIR sequencing failed to establish features of spondyloarthropathy. An ultrasound of his hands demonstrated synovial thickening at the MCPJs, with grade 1 power Doppler at the index finger MCPJ.

Patient 2
A 33-year-old lady presented with a long-standing gradually progressive hand deformity and recent arthralgia and stiffness. There was a family history of rheumatoid arthritis in the mother, and three of her children had Feingold’s syndrome.

On examination, there was progressive symmetrical deformity in all digits bilaterally and mild swelling.

Rheumatoid factor, ANA & anti-CCP antibodies were negative, and inflammatory markers were unremarkable. Ultrasound showed no evidence of synovitis or tendinopathy, and radiographs showed shortening of the second and fifth middle phalanx, but no erosive disease.

Discussion and learning points
Initial history for both patients had the potential to reflect inflammatory disease; however, careful examination demonstrated phenotypic abnormalities. In a medical world of increasingly complex investigative and treatment options, the core skill of physicians remains a good history and examination. Both patients were managed conservatively with occupational therapy and analgesia; however, the presence of significant synovial hypertrophy in patient 1 is unusual and not reported to be related to the brachydactyly syndromes. A watchful waiting approach and reassessment will be required.
Clinical geneticists have been involved in the care of both patients to further assess for other organ manifestations and provide advice to the risk of future progeny being affected. Patient 2 has a confirmed diagnosis of Feingold’s syndrome.

REBOUND ASSOCIATED VERTEBRAL FRACTURE AFTER DENOSUMAB DISCONTINUATION

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Abstract

Background
Denosumab is a fully human monoclonal antibody to receptor activator of nuclear factor kappa-B ligand (RANKL). By binding and neutralising RANKL, denosumab inhibits osteoclast differentiation, activity and survival. Clinical trials in postmenopausal women with osteoporosis have shown that it reduces the risk of vertebral fractures, non-vertebral fractures and hip fractures, with a generally favourable safety profile. Atypical femur fractures and osteonecrosis of the jaw have been reported in patients treated with denosumab.

Clinical Case
We present the case of a 73-year-old Caucasian lady with history of postmenopausal osteoporosis and rheumatoid arthritis. She was admitted with spontaneous acute back pain and was found to have L1 vertebral fracture. She had finished her 5-year denosumab treatment 12 months ago. At the time of vertebral fracture, she was not on any antiresorptive treatment.

Conclusion
Discontinuation of denosumab is followed by rapidly rising bone turnover markers, decreasing bone density and vertebral fracture risk that returns to baseline, with a possible increase in the risk of multiple vertebral fractures. Further study is needed to clarify this potential risk. After stopping long-term denosumab, patients should be switched to another antiresorptive agent to maintain the benefit achieved with denosumab.
TWO HEADED SNAKE

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Mr TR a 76 year old male presented with a PUO in December 2017 with shortness of breath, productive cough, pleuritic chest pain, bilateral pleural effusions, lethargy, weight loss and headache. Blood tests revealed a raised CRP of 402 and a WCC of 16.1. A full septic screen was negative and he failed to respond to multiple courses of antibiotics both clinically and biochemically. A contrasted CT TAP revealed large calibre vessel mural thickening of the thoracic aorta, aortic arch branches and pulmonary arteries with associated mild aneurysmal dilatation. Temporal artery biopsy was negative. A diagnosis of Extra-cranial large vessel vasculitis (LVV) was made. He responded well to high dose oral/IV prednisolone. In the following months there was gradual improvement in his general wellbeing, although he remained mildly dyspnoeic and hypotensive. Inflammatory markers normalised and methotrexate was initiated as a steroid sparing agent.

4 months post diagnosis his breathlessness and fatigue worsened despite his inflammatory markers and blood counts remaining normal. A PET scan was requested to assess for ongoing mural inflammation. The PET scan showed only mild mural metabolic activity but the most striking finding was progressive aneurysmal dilatation of the aortic root, ascending and descending thoracic aorta. The aortic root diameter dilated from 3.4cm to 7cm, ascending aorta from 3.7cm to 6.1cm and descending thoracic aorta from 3.3cm to 5.1cm. He was referred urgently to the cardiothoracic surgical team but developed an aortic dissection requiring extensive surgery consisting of aortic valve replacement, ascending and descending aortic grafting to the level of the renal arteries, CABG and a PPM. He required a prolonged ITU spell post-surgery and is continuing to make a slow recovery.

Despite responding well to treatment clinically and biochemically this patient developed devastating aortic damage over a short period of time. Large vessel involvement occurs in approximately 25% of patients with giant cell arteritis with aneurysmal dilation being the commonest manifestation. Most aortic aneurysms occur five years or more after diagnosis and are correlated with male sex and pre-existing hypertension. This case illustrates the challenges of monitoring these patients and difficulties detecting large vessel complications early in their development.
A CASE OF ASEPTIC MENINGITIS ON A BACKGROUND OF RHEUMATOID ARTHRITIS

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Case

A 65-year-old Caucasian lady had a background of longstanding seropositive rheumatoid arthritis (RA) for which multiple disease modifying drugs and biologics had been tried, but then stopped due to either inefficacy or intolerance. She presented with generalized tonic clonic seizure and loss of consciousness. As an inpatient she developed pneumonia and two myocardial infarctions. For the next four months, she was seizure-free on Levetiracetam, but experienced right-sided facial twitching despite anti-epileptic medications. She had a temporal visual field defect in the right eye. On examination there was no other cranial nerve abnormality and peripheral nervous system examination was normal. Gadolinium enhanced MRI brain showed small subdural effusions in the left frontal/parietal lobes bilaterally alongside effacement of the frontal/parietal gyri, indicative of leptomenigitis. Lumbar puncture showed increased cerebral spinal fluid (CSF) protein of 1.25g/L (0.1-0.4) and mildly reduced glucose of 2.1mmol/L (2.2-3.9). CSF was negative for Acid Fast Bacilli, Lyme disease, Cryptococcal antigen, PCR for viruses and TB, culture and extensive immunological screening. Tuberculosis T-Spot test was negative whilst PET-CT demonstrated widespread polyarthropathy but no evidence of an underlying malignancy. The patient was considered for meningeal biopsy; however it was deemed too high-risk given her medical co-morbidities.

She was commenced on a reducing regime of prednisolone on the assumption of rheumatoid meningitis and also given a 12-month course of empirical therapy to cover for possibility of TB meningitis, although this was deemed less likely. Initially she responded to prednisolone but upon dose reduction, she noticed worsening incoordination and unsteadiness, with simultaneous flare-up of her joints, indicating that immunosuppression was beneficial to her neurological status. Azathioprine was introduced as a steroid sparing agent but she developed abnormal liver function and hence an alternative steroid-sparing agent such as mycophenolate will be used.

Discussion

Aseptic meningitis exists where there is meningeal inflammation with negative Gram stain and culture of CSF, often with pleocytosis. Although predominantly caused by enteroviruses; it can occur secondary to malignancy, drugs and autoimmune disease. In this instance we focus on a likely case of rheumatoid meningitis. This uncommon complication of seropositive rheumatoid arthritis was described by Bathon et al as having three hallmark neuropathological findings; rheumatoid nodules, pachymeningitis and vasculitis. A diagnostic challenge is the lack of correlation between synovitis and neurological presentation. Presentation ranges from cranial/peripheral nerve dysfunction to seizures and altered mental state. In the CSF we expect to find high protein and reduced glucose with sporadic pleocytosis. Findings from MRI and CSF analysis can be variable. Ultimately rheumatoid meningitis as described in the literature is diagnosed by histopathology at biopsy, but this is not always available in clinical practice, and sometimes empirical treatment has to be given.

Rheumatoid meningitis is a rare complication of RA, but can present with stroke-like episodes or seizures, so this diagnosis should always be considered in RA patients presenting in such a way. Despite high mortality and the lack of any evidence-based guidelines, combinations of steroids alongside cyclophosphamide, azathioprine and methotrexate are reported to have improved prognosis in some patients.

A SYSTEMATIC REVIEW OF PREGNANCY OUTCOME IN ANKYLOSING SPONDYLITIS
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Background
Ankylosing spondylitis (AS) is a chronic, systemic inflammatory arthritis predominantly affecting spine and sacroiliac joints. AS affects young individuals in their third and fourth decades of life. Pregnancy poses challenges in AS patients. Unlike other chronic autoimmune diseases, not much is known regarding pregnancy outcome in AS and a systematic review would help treating clinicians and health professionals.

Objective
Our main objective was to evaluate the pregnancy outcomes in ankylosing spondylitis. We reviewed the management and care related to preconception counselling, antenatal, intrapartum and postpartum period, particularly disease activity, medications and birth outcomes.

Methods
A systematic search of PUBMED and EMBASE was performed. Relevant peer reviewed papers were identified using inclusion criteria which included articles on pregnancy outcomes in AS patients above 16 years. We included only English articles covering systematic reviews, randomized control trials, case reports, observational studies published in medical literature between 1970 and March 2017. We excluded papers discussing general management of AS and articles on other autoimmune diseases and pregnancy. Each author screened the title and abstracts individually based on our criteria. A standardized data collection form was used for assessment of study quality and evidence synthesis. Systematic review was registered in PROSPERO and we followed the PRISMA flow chart.

Results
Our search yielded 544 papers. After initial screening of the titles and abstracts 443 papers were identified of which 42 potentially relevant papers were selected for full text review. 18 papers were finally included. Our initial results are based on individual papers. Monika Ostensen et al observed unaltered or aggravated disease symptoms during pregnancy in 80%. Nai Lee Lui et al observed a reduction in pain in the first trimester, first month postpartum with increase in the second and third trimester and in up to 6 months postpartum. Delivery was mainly uncomplicated and was normal in most cases. A postpartum flare during the first 3 months occurred in 90% of AS pregnancies. Zhou et al studied 12 AS patients retrospectively with no adverse outcomes, all had term pregnancies with 5 normal vaginal delivery, 7 caesarean, delivery was based on obstetric reasons. Hakan Timur et al did not notice any adverse pregnancy outcomes. Worsening of symptoms was seen in 60-90%of patients up to 6 months after delivery. Jakobsson et al noticed women with AS had a higher prevalence for several adverse birth outcomes with an influence by both disease severity and comorbidities. Case reports highlighted anaesthetic difficulties during delivery.

Conclusion
To the best of our knowledge, this systematic review is the first one reviewing the outcome of pregnancy in ankylosing spondylitis. As the studies were heterogeneous, the pregnancy outcome was not consistent. There is paucity of data about pregnancy management for women with AS and further research is needed in this area to guide evidence based management of these pregnancies.

References
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AN OBSERVATIONAL STUDY INTO THE RELATIONSHIP OF ANTI-CYCLIC CITRULLINATED PEPTIDE ANTIBODY AND RHEUMATOID FACTOR WITH LUNG DISEASE

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Background: Rheumatoid arthritis (RA) is a progressive, inflammatory, autoimmune condition (1). Extra-articular disease occurs in half of patients, with lung being a common site of complication, and is associated with increased mortality(2).

Rheumatoid factor and anti-cyclic citrullinated (anti-CCP) antibody are serological markers of RA, anti-CCP has greater specificity and serves as a predictor of RA development. (3) Smoking has been strongly linked with the development of anti-CCP antibodies and subsequent RA development. Raised RF and anti-CCP titers have been associated with the development of pulmonary disease, most frequently ILD (4).

Objectives: Our aim was to explore the relationship between the presences of RhF and anti-CCP antibody with pulmonary manifestations in the following groups:

1. RF positive only (group 1)
2. Anti-CCP factors positive only (group 2)
3. RF and anti-CCP positive in combination (group 3)

We also explored the relationship between smoking, seropositivity and lung disease.

Methods: Data of patients who have blood tests requested for RF and Anti-CCP antibodies was retrieved from clinical web portal at Royal Wolverhampton Trust for a period of 12 months from (November 2015 October 2016) with a total of 2088 patients.

Results: In group 1 (30) 33.7% of RF positive patients suffered from RA, with (63) 70.7% in group 2 and (82) 92.1% in group 3(P=0.00001). In group 1 17% were current or ex-smokers, 29% in group 2 and 52.7% in group 3(P=0.02). Lung disease was present in 13.4% from group 1, 7.8% from group 2 and 12.3% from group 3 with no significant statically difference between the three groups (p=0.376). In group 2 and 3 all patients with lung disease had RA. From group 1, 50% of those with lung disease had a diagnosis of COPD, followed by 20% with bronchiectasis and 10% with ILD. Of note patients with a diagnosis of COPD had a higher titer of RF. In group 2 a third of patients with lung disease had a diagnosis of COPD and ILD respectively, and again these patients had higher titers of anti-CCP. In group 3 13.4% suffered from lung manifestations and 37.5% had a diagnosis of pulmonary fibrosis, 12.5% diagnosed with ILD and the remaining 50% had COPD and pleural disease.

Conclusions: As expected RF, anti-CCP and both RF and anti-CCP antibody positivity were progressively associated with higher prevalence of RA. Our findings provide further evidence for the association between smoking and raised antibody titres, especially with anti-CCP antibodies. Lung disease was more strongly associated with RF than anti CCP even though the proportion of smokers was higher in patients with positive anti CCP compared than RF. However lung pathology varied with airway obstruction being more prevalent in RF positive patients compared with fibrosis in patients who were RF and CCP positive. More recently it has been postulated that COPD may also have an autoimmune mediated component and it is interesting to see a greater prevalence of COPD in RF positive only patients despite a greater number of smokers in patients with positive RF and anti CCP(6). Furthermore, our findings suggest seropositivity of both RF and anti-CCP antibodies are linked with more severe autoimmune pulmonary disease. This suggests that RF is more strongly associated with lung disease than anti CCP though citrullination is thought to begin in the lungs.
Our study is limited by the short term follow up of patient outcomes and the lack of controls for each group. Our findings demonstrate that lung disease is prevalent in patients with RA and should be anticipated and treated accordingly in order to reduce mortality and disease burden. Our results indicated seropositivity of both RF and anti-CCP can be linked with a higher prevalence and greater severity of pulmonary disease activity however this requires replication in a larger cohort.

References
HYDROXYCHLOROQUINE PRESCRIPTION AND MONITORING: A COMPARISON BETWEEN UK AND INDIA

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Background
Hydroxychloroquine has renewed interest among medical community as its previously unknown potential uses undergo clinical trials and emerging data suggest side effect profile is changing possibly due to changing population demographics. Healthcare in UK is free at the point of care and whereas India has predominantly private healthcare providers for Rheumatology services.

Objectives
2. Understand awareness of cross specialty guidelines.
3. Explore barriers to evidence-based monitoring.

Methods
We shared survey link from google forms to health professionals prescribing and monitoring hydroxychloroquine. Survey data was analysed through excel spreadsheet and autogenerated graphs.

Results
We were able to compare practice two different healthcare systems and noted following. Rheumatology care in India were provided by a range of specialists including consultant rheumatologists, immunologists, internists or other specialists with interest in rheumatology. Care in UK is provided by consultant and trainee rheumatologists, specialist nurses. Rheumatology service availability in India is restricted to urban areas whereas fairly distributed across UK. UK mostly had mostly generalist Rheumatologists and Indian rheumatologists were predominantly subspecialised in Connective tissue disease or inflammatory arthritis. Indications for Hydroxychloroquine varied significantly between two countries with the drug being prescribed more often in India (4-5 new patients per week) than UK (3 new patients per week). Other than inflammatory arthritis and connective tissue disease it is also used for post viral arthritis, antiphospholipid syndrome, osteoarthritis and diabetic arthropathy.

Indian clinicians favoured American guidelines and UK have their own national guidelines for hydroxychloroquine prescription and monitoring. Awareness of these guidelines was better in UK (97%) compared to India (77%) however compliance was subpar.

53% clinicians in India referred for a baseline OCT but 45% in UK did the same. Referral for OCT after 5 years was better in UK (70%) than India (54%). Major barriers to implement advice from international guidelines were lack of capacity and service availability in UK, similar issues were noted in India but cost remained a major issue impacting on patient compliance in India. There were concerns expressed by clinicians on cost effectiveness of the current recommended monitoring regime which needs further research.

Conclusion
Adherence to prescription and monitoring guidelines could be improved by better awareness and robust data in support of current guidance.
BILATERAL FINGER SWELLING IN A YOUNG MAN - PACHYDERMODACTYLY MASQUERADING AS INFLAMMATORY ARTHRITIS

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17 year-old young man was referred with discomfort of the proximal interphalangeal joints for over a year and swelling for 6 months. He was concerned about the appearance of his swollen fingers. He had no history of early morning stiffness, fever, rash, uveitis or colitis. He did not have any significant past medical history. His maternal grandmother and great grandmother had rheumatoid arthritis.

On examination, he had swelling of the PIP joints of the index, middle, ring and little fingers in both hands but no tenderness. His complete blood count, C reactive protein and erythrocyte sedimentation rate, ferritin, renal function were all normal and rheumatoid factor, anti-CCP and ANA were negative. Plain radiograph of hands showed soft tissue swelling of PIP joints without erosive changes or joint space narrowing. Ultrasonography of hands did not show any synovitis/erosions/tenosynovitis. He was treated as seronegative rheumatoid arthritis with methotrexate and hydroxychloroquine for 3 months.

The lack of response to immnosuppressive therapy made us suspect the underlying diagnosis. History was reviewed and he was born full term and had normal milestones, the only unusual activity over the last 4 years was spending long hours on his desktop computer and habitual cracking of his knuckles. The previous photos of his hands when he was at school did not have any swelling of the fingers. MRI of the hands revealed soft tissue swelling but no bone marrow oedema, joint effusion, synovial hypertrophy. He was diagnosed with pachydermodactyly and we attributed the cause of joint swelling to the long hours on the computer keyboard and habitual cracking of knuckles leading to mechanical trauma and soft tissue swelling. We advised him to minimise the keyboard activity and referred him to Occupational Therapy for advice on modifying his activities.

Pachydermodactyly is a rare benign acquired dermal fibromatosis affecting the dorsal skin and subcutaneous tissue of the proximal interphalangeal joints of the hand. It is characterized by an asymptomatic, progressive swelling of periarticular soft tissues of the fingers. Most cases are bilateral and symmetrical, usually involving the PIP joints of the second, third, and fourth fingers, less commonly the fifth finger. Usually the thumb is unaffected. Unilateral cases are rare. Most patients are adolescent males, with few cases reported in females. Patients often give a history of repetitive mechanical finger stimulation. The repeated mechanical stimulation is attributed to the pathogenesis.


Crossref | PubMed | Scopus (17) | Google Scholar See all References Clinical features are often sufficient to exclude most alternative diagnoses. It is important to recognize this clinical condition in order to avoid unnecessary investigations and treatments.
A MAN WITH RED EARS

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Introduction: Red ears are a common result of trauma or infection and can also be a feature of erythromelalgia and relapsing polychondritis (RPC). Red Ear Syndrome (RES) is different; it is a very rare disorder characterised by recurrent attacks of unilateral or bilateral paroxysmal burning sensation or pain with reddening of the external ear.

We present the case of a man referred to our clinic because of episodic painful red ears. The GP asked ‘could these symptoms be indicative of a connective tissue disease?’ We assume that the GP was aware of RPC, hence the referral to rheumatology.

Case description: A 37 yr old Asian man had been experiencing episodic and sudden onset of burning pain and redness of one or both ears for 18 months. Episodes resolved after approximately 15 minutes by applying cold water, or settled spontaneously within one hour. The frequency of attacks ranged from 4 to 5 times a day to once a week, generally worse in the winter months when heating is on. There were no other triggers. He was systemically well and denied involvement of any other parts of the body. There was no past medical history and he was taking no medications. Clinical examination did not reveal Raynaud’s and there were no features of a connective tissue disease or RPC. A photograph of one ear during one an episode showed uniform erythema. Investigations revealed normal inflammatory markers, negative ANCA and ANA. A diagnosis of RES was made. No specific treatment was required.

Discussion: Red ear syndrome (RES) is very rare, first described in 1994 by Lance. In 2013, Lambru et al reviewed 101 published cases of RES and described the main characteristics. The duration of episodes ranges from a few minutes to several hours and the frequency of the attacks ranges from several a day to a few per year. Episodes can occur spontaneously or be triggered by heat, exertion, rubbing or touching the ear and neck movements. On a few occasions autonomic symptoms such as lacrimation and nasal blockage have been reported. Idiopathic / primary RES occurs at any age, and in younger people it may be associated with migraine. Secondary RES may occur in older patients with upper cervical spine disorders or temporo-mandibular joint dysfunction. RES appears generally refractory to treatment. However several drugs including antineuralgics, calcium channel blockers and anti-inflammatories have been tried with variable benefit. Some migraine preventative treatments have shown moderate benefit in patients with migraine-related attacks.

The pathophysiology of RES is unclear. Dysfunction of cervical spinal nerves (predominantly C3 root) and dysregulation of brainstem trigemino-autonomic circuits have been considered. More recently a primary dysfunction of small sensory and sympathetic fibres of the ear skin has been considered because of an occasional overlap with erythromelalgia.

This is likely to be the first recorded case of RES presenting to a rheumatologist. It is important that it is not confused with RPC. In RPC there is sparing of the earlobes and manifestations are chronic, often responding to anti-inflammatories and steroids. Even though RES is very rare it is important that rheumatologists are aware of it.

References:
DRUGS USED IN RHEUMATOLOGY AND PERIOPERATIVE MANAGEMENT - A LOCAL SURVEY

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Background
The management of rheumatic diseases has been revolutionised by the introduction of novel therapies in addition to existing immunosuppressive drugs. During the course of rheumatic diseases elective or emergency surgeries are inevitable. Though literature suggests less and less patients are subjective to orthopaedic surgery, management of this group of patients is challenging perioperatively while they are on powerful immunomodulating drugs. In routine clinical practice it is a clinical challenge for rheumatologists, surgeons and anaesthetists regarding the timing and management of drugs perioperatively. It is difficult to achieve the right balance in this kind of a clinical situation. We attempted to explore the current clinical practice among our surgical colleagues.

Objective
1. To explore the current practice by surgeons regarding the timing of stopping standard DMARDs and biologic disease modifying agents
2. To explore the current practice by surgeons regarding the timing of Restarting standard DMARDs and biologic disease modifying agents
3. To see any local guidelines followed by surgeons

Methodology
Initial questionnaire was designed and piloted among orthopaedic surgeons and the improved questionnaire was then circulated using a software -smart survey. The results were collated and analysed using Excel spreadsheet and auto developed graphs.

Results
50 selected surgical colleagues were emailed the survey link. 17 of them responded with a 34% response rate. 30% of the people who responded were consultants and others in various stages of their surgical career. All the responders were working in University Hospitals of Leicester NHS Trust as expected. 47% of the responders were in Trauma & Orthopaedics, 30% in general surgery and the rest in spinal surgery and ophthalmology. About 80% of them schedule at least 1-5 patients per month for elective surgery when they are on immunosuppressive treatments. A huge majority of surgeons (82%) stop immunosuppressive drugs before surgery. The highlighting features of the survey were, surgeons still continue to stop Methotrexate despite clear evidence that it is safe to continue it during surgery. We noticed huge inconsistency in the stopping and restarting of biological modifiers by surgeon’s perioperatively. About 30% decide the duration of this based on the half-life of each drug. About 40% consult a rheumatologist. Only 17% follow a local/trust/national guideline and the remaining use their own clinical acumen to decide. Despite 60% of them being aware of the British Orthopaedic Society guidelines the adherence to it is very inconsistent. The major postoperative complication that the surgeons were concerned about is infection, followed by failure of prosthesis and delayed wound healing.

Conclusion
Despite being a small survey, it clearly highlights the inconsistency in clinical practice with regards to management of immunosuppressive drugs in general. Clear guidelines exist; however, it hasn’t been communicated effectively to the treating surgeons and anaesthetists. More education, communication and collaborative work will improve the consistency in clinical practice. We are extending our survey nationally and would like to update the members in near future.
LV, a 47 year old gentleman, was admitted via the Emergency Department with a 1 day history of sudden-onset right ankle pain with inability to bear weight, as well as left shoulder and right buttock pain. His past medical history included type 2 diabetes, ureteric calculi, hidradenitis suppurativa, and psoriasis. Relevant drug treatment included adalimumab injections. LV had previously worked as a warehouse operative, smoked 10 cigarettes a day, and drank no alcohol.

On initial assessment, LV was afebrile. Examination revealed tenderness over right gluteal muscles, painful restriction of left shoulder movements, and tender, swelling and erythema of the right foot and ankle. LV reported severe pain in affected joints with minimal active or passive movement despite oral morphine.

The initial impression of the assessing surgical team was right ankle septic arthritis, with a differential diagnosis of an acute flare of undiagnosed psoriatic arthritis. Blood tests revealed white cell count of 20.3, CRP 238 but were otherwise normal with preserved renal function. X-rays of right foot, left shoulder and pelvis were unremarkable. Antibiotics were not commenced on advice from the Trauma & Orthopaedic (T&O) team, and joint aspiration was recommended but not performed. Instead, ultrasound scans of the shoulder and ankle in question were requested, and a rheumatology referral was sent with a query of gout or psoriatic arthritis.

At rheumatology review (day 3) LV demonstrated fever (37.9 degrees). He denied previous podagra, but had been treated for kidney stones with hyperuricosuria. He had also suffered Achilles tendinitis. Buttock pain was felt to be consistent with sacro-iliac joint irritation (possibly reactive), although the need for urgent peripheral joint aspiration / washout was reiterated, with infection remaining at the top of the differential diagnosis.

Left shoulder and right ankle ultrasound scans were performed on day 5 and demonstrated synovial thickening (ankle) only; no fluid was aspirated. LV was given Prednisolone overnight with some improvement in shoulder pain, but not other symptomatic joints. Unguided right ankle aspiration was performed and 4mL turbid fluid obtained. Initial microscopy and crystal analysis were negative, although Gram positive cocci were grown in culture, and the organism later identified as a fully sensitive Streptococcus pneumoniae. Open right ankle washout was performed the same day. Magnetic resonance (MR) pelvic imaging was performed on day 11 because of persistent buttock pain, and revealed marrow oedema at the sacroiliac joint with involvement of adjacent soft tissues and a localised fluid collection in keeping with septic arthritis. LV completed two weeks of intravenous and four weeks of oral antibiotics, although over 18 months rehabilitation with physiotherapy and pain team input were required before any significant symptomatic improvement in his sacroiliac symptoms.

**Take home messages:**

1) Septic arthritis is a rare but important differential diagnosis of symptoms arising from the sacroiliac joint, with characteristic features on magnetic resonance imaging including oedema of adjacent soft-tissue structures, and extracapsular fluid collections

2) *Streptococcus pneumoniae* remains an uncommon cause of septic arthritis, and is usually associated with underlying immunosuppression. Provided the pathogenic organism is not resistant to penicillins, the prognosis is usually favourable.

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EVALUATION OF ADVICE AND GUIDANCE SERVICE PROVIDED AT RHEUMATOLOGY DEPARTMENT OF UHCW
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Aim-
To evaluate the Advice and Guidance requests received from the Primary care.

Introduction-
Advice and Guidance is a service provided at the Rheumatology department, UHCW to address concerns of primary care services. The requests are received by the consultant of the day who is expected to respond to the query within 24 hours. We have reviewed these requests in order to understand the effectiveness of the service and how it can be improved.

Methods-
We reviewed Advice and Guidance requests from the Primary care from January 2018 to June 2018. We subcategorised these requests according the rheumatological condition. These requests were further looked at for the nature of the question raised by the primary care team.

Results-
We found 159 requests with a clear rheumatological question, asked by the primary care team. We subcategorised the referrals further as for joint pains, connective tissue disease (CTD), metabolic bone disease and miscellaneous. The miscellaneous group included fibromyalgia, hypermobility, chronic fatigue, incidental findings. The distribution of the conditions is illustrated in the pie chart below.

The requests pertaining to joint pains/ suspected inflammatory arthritis and CTD constituted 63% of the requests. Primary care team had requested rheumatology outpatient review in 39% of the requests. Among those 34 (21%) were deemed appropriate for review in the outpatient clinic and primary care team was asked to do formal referral through choose and book.

Among these 34 patients 21 patients were reviewed in the outpatients department. Remaining patients were not referred despite our advice. The diagnosis among those patients is in the table below.
We looked at the response time for providing advice to primary care and we found that 47% received response within 24 hours; 17% received response within 48 hours; 11% received response within 72 hours and 25% received response beyond 72 hours (corrected for weekend). The median request to response time was 1 day.

**Conclusion**

- Majority of the Advice and Guidance requests were for joint pains and possible CTD related queries based on abnormal bloods, no clinical features were mentioned.
- Just over half the patients which were sought for outpatient clinic appointment were deemed appropriate for outpatient appointment.

Based on the data we are developing a proforma for advice and guidance which will add clarity to the questions and value to the advice.
CASE OF CHONDROSARCOMAS AND ITS ASSOCIATION WITH ANTI TNF THERAPY
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Background-
Biologic therapy is a common form of treatment used in several rheumatological conditions. Use of anti-TNF treatment has increased over the past few years. Anti-TNF drugs are generally contraindicated in the presence of malignancy. We are presenting a case of a psoriatic arthritis patient who was treated with Etanercept who developed a chondrosarcoma.

Case description-
Miss VV is a 42 year old female who was diagnosed to have psoriatic arthritis in 2005. She has a background history of psoriasis and hereditary exostosis.

She was evaluated for right femoral osteochondroma in 2005 at Royal Orthopaedic hospital, Birmingham (ROH) and was found to be benign.

Patient was initially managed with disease modifying treatment in the form of oral methotrexate and sulfasalazine but was switched to subcutaneous (s/c) methotrexate due to persistent joint disease and intolerance to oral methotrexate. Her psoriasis was quiescent throughout.

Patient had grumbling disease despite s/c Methotrexate and Etanercept was added in 2009. Etanercept brought the joint disease under good control.

Patient had intermittent chest infections for which she came off methotrexate without any worsening of arthritis. Patient continued to get recurrent chest infections for which she had a CT scan of her chest. Her chest CT showed an incidental finding of left scapular bony lesion which was thought to be a osteochondroma and a subsequent MRI supported that diagnosis. MRI of her left scapula showed osteochondroma with cartilage cap of 2cm. Her scans were discussed in the radiology MDT and then patient was referred to ROH for further advice. At ROH, she underwent biopsy of the lesion, which further proved to be low grade chondrosarcoma.

Patient then underwent excision of the tumour. Etanercept has not been introduced as yet.

Discussion-
Chondrosarcoma is the third most common primary bone tumour after myeloma and osteosarcoma. It can be primary or secondary based on the presence of precursor lesions. Enchondroma and osteochondroma are the precursor lesions. Based on the histology grading it can be low, intermediate or high grade where low and intermediate grade tumours constitute 90% of the cases. Clinical presentation includes new bony swelling and pain although often it can be asymptomatic. Diagnosis is based on CT/ MR imaging with biopsy. Surgical excision is the most effective treatment, as these tumours don’t respond to chemo and radiotherapy. There are a few case reports of primary bone malignancies but no strong evidence of association with anti TNF therapy. We could not find any evidence to suggest higher incidence or recurrence of chondrosarcoma following anti TNF therapy.

Conclusion-
- The data on incidence of chondrosarcoma with anti TNF use is very limited.

There is no evidence to guide the anti TNF treatment following chondrosarcoma.
THESE SPOTS ON MY SHINS… COULD IT BE SOMETHING I ATE? – A RARE CASE OF CRYOGLOBULINAEMIC VASCULITIS

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The Dudley Group NHS Foundation Trust

Background:
Patients with cutaneous vasculitis frequently present with pyrexia, systemic features and increased acute inflammatory response. This poses a diagnostic challenge with a differential including autoimmune, infectious and malignant causality. Cases of cryoglobulinaemic vasculitis can be especially challenging as regularly an infectious cause may serve as the trigger for autoimmunity.

Methods:
A 72-year-old male presented with lower extremity purpuric rash, intermittent fever (>38°C), polyarthralgia and increased inflammatory markers. His medical history included: transcatheter Aortic Valve Replacement (tAVR) due to severe aortic stenosis twelve months previously, ischaemic heart disease and diabetes mellitus. He reported a recent diagnosis of acute icteric hepatitis A (HAV) infection while on holiday in France, attributed to eating seafood, from which he had recovered. At rheumatology review, a rash consistent with cutaneous vasculitis was noted, but no other target organs were obviously involved.

Results:
His investigations are summarized in table 1. Despite the high inflammatory markers, the patient was not acutely unwell and we refrained from any vasculitis-specific treatment, though empiric antibiotics had already been given. The rash was intermittent. No vegetations were seen on at least 2 transoesophageal echocardiograms. The prosthetic valve was functioning well despite mild paraprosthetic regurgitation. CT imaging revealed no underlying malignancy. PET-CT showed non-specific bilateral inguinal lymphadenopathy and focal uptake around the AVR. An inguinal lymph node biopsy showed reactive histology.

The patient improved over several weeks without specific treatment with resolution of fever and rash. LFTs, inflammatory markers and immunoglobulin levels are all improving. Seroconversion of anti-HAV IgM to anti-HAV IgG was proven. In the absence of alternative causes we consider the cryoglobulinaemic vasculitis was caused by acute HAV infection.

Conclusion:
We report on a rare case of cryoglobulinaemic vasculitis with cutaneous and systemic symptoms, associated with acute HAV infection. Very few case reports exist in the literature describing this association. PET-CT scans showing uptake around prosthetic valves should be interpreted with caution as evidence shows ongoing diffuse peri-valvular uptake when studied twelve months post replacement. In the absence of critical target organ involvement, it may be worth to remain cautious with treatment until investigations are conclusive.
Table 1. Summary of investigation results

<table>
<thead>
<tr>
<th>Investigation</th>
<th>3 months before presentation</th>
<th>Admission</th>
<th>Recent review</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRP</td>
<td>34 mg/L</td>
<td>115 mg/L</td>
<td>10 mg/L</td>
</tr>
<tr>
<td>ALT</td>
<td>771 iu/L</td>
<td>48 iu/L</td>
<td>34 iu/L</td>
</tr>
<tr>
<td>Alkaline Phosphatase</td>
<td>322 iu/L</td>
<td>162 iu/L</td>
<td>159 iu/L</td>
</tr>
<tr>
<td>IgG</td>
<td>43.1 g/L</td>
<td>29 g/L</td>
<td>21.7 g/L</td>
</tr>
<tr>
<td>Rheumatoid Factor</td>
<td>&lt;10 iu/L</td>
<td>67 iu/L</td>
<td></td>
</tr>
<tr>
<td>Cryoglobulins</td>
<td></td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Polyclonal mixed type III cryoglobulinaemia</td>
<td></td>
</tr>
<tr>
<td>T-Spot-TB</td>
<td></td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Mycobacterium PCR in sputum</td>
<td></td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>ANA</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>ANCA</td>
<td>1:80</td>
<td>1:80</td>
<td>1:160</td>
</tr>
<tr>
<td>PR3/MPO</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>Blood cultures x 3</td>
<td></td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Procalcitonin</td>
<td></td>
<td>0.09 ng/mL</td>
<td></td>
</tr>
<tr>
<td>Anti-HAV IgG</td>
<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td>Anti-HAV IgM</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>Hepatitis B and C serology</td>
<td></td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Serology for Borrelia, Brucella, EBV, CMV, Enterovirus, mycobacterium Chimerium</td>
<td></td>
<td></td>
<td>Negative</td>
</tr>
</tbody>
</table>