Midland Rheumatology Society Spring Meeting
Friday 27th March 2015
Post Graduate Education Centre
Nottingham City Hospital Campus, Nottingham, NG5 1PB
http://www.nuh.nhs.uk/

09:00  Coffee and Registration

09:30  Welcome and Introduction

09:40  “Pyrexia of Unknown Origin: Stimulus and Response”
Dr Prith Venkatesan, Consultant Infectious Diseases,
Nottingham University Hospitals NHS Trust

10:25  “Autoinflammation - from Clinic to Bench and Back Again”
A Clinical Case and Discussion from Nottingham’s Immunology¹ and Rheumatology² Teams
Dr Frances Rees², Rheumatology SpR
Dr Elizabeth Drewe¹, Consultant Immunologist, NUH

11:00  Coffee Break & Poster Viewing

11:20  Clinical Papers A
1. Poor Positive Predictive Value of PR3 and MPO antibodies in Diagnosis of ANCA Associated Vasculitis
   Fiona Pearce, Richard Watts, Peter Lanyon

2. What is the potential impact of the NHS Commissioning Policy on the need of IV iloprost on Raynaud’s Phenomenon- Retrospective review of IV iloprost use
   Bernal JA, Courtney P, Lanyon P

3. Ultrasound-defined Tenosynovitis is a Strong Predictor of Early Rheumatoid Arthritis
   I Sahbudin, A Filer

   F Rees, M Doherty, M Grainge, P Lanyon, G Davenport, W Zhang
12:20  Clinical Cases from Nottingham

12:50  BSR Update and Update on Specialised Commissioning
Dr Peter Lanyon, Consultant Rheumatologist, NUH

13:20  Lunch & Poster Viewing
Optional Meeting: NHS England Specialised Rheumatology CRG West Midlands Steering Committee (Room 4)

14:20  “Immunodeficiency and Autoimmunity - New Challenges Related to Immunosuppression”
Cases and Discussion from Nottingham’s Immunology³, Virology² and Rheumatology¹ Teams
Dr Fiona Pearce¹, Rheumatology SpR
Dr Fouzia Jabeen², Consultant Virologist, NUH
Dr Liz McDermott³, Consultant Immunologist, NUH

15:05  NIHR Research Feedback
Dr Tom Sheeran, Consultant Rheumatologist, Cannock Chase Hospital

15:35  Coffee Break & Poster Viewing

15:55  Clinical Papers B

5. Comorbidity clusters in people with gout: a primary care-based observational study
Megan Bevis, Milisa Blagojevic-Bucknall, Christian Mallen, Samantha Hider, Edward Roddy

6. The Cost of Patient Advice - a Telephone Advice Line Audit
Samantha Roskell, Barbara Douglas, Heather Keating, Sally Giles et al

7. Audit on the Management of Rheumatology Patients who developed Malignancy while on Anti TNF Treatment
Shiv Uppal, Arumugam Moorthy

8. To do or not to do? Outcome of screening for latent TB infection (LTBI) with Quantiferon Gold/T-spot in rheumatology patients prior to biologic therapy
Duggal V, Passey K, Lloyd B, Roskell S, Mulherin D, Sheeran T, Venkata Chalam S

16:55  Close
18:00  “An Introduction to the Universe” A key note lecture
Professor Frazer Pearce, Professor of Physics, University of Nottingham
Venue: Function room at Mr Man’s Restaurant

18:45  Drinks Reception and Dinner at Mr Man’s Restaurant,
Wollaton Road, Nottingham, NG8 2AD

RCP Approved - CPD code number to be confirmed

The meeting is kindly sponsored by
Pfizer Ltd, Menarini, Grifols, Amgen, UCB Pharma Ltd, Bristol Myers-Squibb,
Eli Lilly & Company Ltd, Gruenthal, Abbvie Ltd, Chugai, Roche, Janssen-Cilag
The sponsors have provided payment for an exhibition stand space at this educational
meeting and have had no control over the agenda and arrangements.
In accordance with the ABPI code of practice, the funding obtained is solely for the Spring
Midland Rheumatology Society Meeting on the 27th March 2015 and not intended for use for
the after course lecture and dinner.

Nottingham City Hospital
Information on getting here, car parking, public transport, map of the hospital
http://www.nuh.nhs.uk/getting-here/city-hospital/
Clinical Papers
PSEUDO-GOUT AS THE PRESENTING FEATURE OF GITELMAN SYNDROME

Dr Muhamad A Jasim, Dr Mia Fletcher, Professor Rousseau Gama & Dr Nick Barkham
New Cross Hospital, Wolverhampton

Abstract

Pseudo-gout is an asymmetrical inflammatory joint condition typically found in older patients. However, individuals diagnosed with pseudo-gout at a younger age should be investigated for possible metabolic causes contributing to their symptoms.

We highlight a case of a 49-year-old lady who was diagnosed with pseudo-gout, after an aspiration of her acutely swollen and tender left knee was positive for calcium pyrophosphate dihydrate (CPPD) crystals. The patient was hypotensive with a systolic blood pressure of 90. Subsequent investigations revealed that she was alkalotic with a persistent hypokalaemia, hypomagnesaemia and hypocalcuria. Serum creatinine, calcium, phosphate, ferritin and PTH levels were normal. X-rays of her knee and hands confirmed chondrocalcinosis.

The patient was diagnosed with Gitelman syndrome, an inherited renal tubular disorder. This little known condition has been found to be a key cause of pseudo-gout in younger patients.

The association of pseudo-gout with more common metabolic abnormalities such as hyperparathyroidism and haemachromatosis is well known, but the association with Gitelman syndrome may be less well known or recognised by rheumatologists. Standard rheumatology textbooks do not include any mention of Gitelman syndrome, and mnemonics such as WHIPADOG (Wilson Disease, Hyperparathyroidism/Haemachromatosis/Hypophosphataemia, Idiopathic, Pseudo-gout, Acromegaly, Diabetes Mellitus, Ochronosis, Gout) taught to trainees to identify causes of chondrocalcinosis, do not include this disorder either.

This case report describes the clinical features and diagnostic criteria for Gitelman syndrome and highlights some of the evidence that supports its association with pseudo-gout as well as the management options available.
CRANIAL PACHYMENINGITIS - A RARE COMPLICATION OF ANCA-ASSOCIATED VASCULITIS

Dr Jeanette Trickey, SpR New Cross Hospital
Dr JJ Dixey, Consultant Rheumatologist New Cross Hospital

Abstract
This case report describes a case of granulomatosis with polyangitis, which was complicated by cranial pachymeningitis. A 56 year old gentleman was initially seen in Rheumatology in May 2013 with rash, fatigue and arthralgia affecting the small joints of his hands. cANCA PR3 was raised at 42. The rash settled after treatment with antibiotics, and the patient improved with no immunosuppressive therapy.

In February 2014 he had developed a chronic headache, right facial pain, tinnitus, deafness and right nasal crusting. cANCA PR3 had decreased to 7. MRI brain showed Type 1 Arnold Chiari malformation and evidence of intracranial hypotension. Chiari malformation is congenital abnormality where the cerebellar tonsils herniate through the foramen magnum, and can cause a multitude of clinical symptoms including those experienced by this patient. He was reviewed by neurology, then neurosurgery who felt there was no need for surgical intervention. Appearances on subsequent MRIs were of thickening of the dural layer, thought due to a CSF leak.

The patient then presented to the Emergency Department in December 2014, first with symptoms diagnosed as Bell’s palsy, then 2 weeks later with vomiting and aspiration pneumonia secondary to bulbar palsy and dysphagia. He developed respiratory failure and was intubated on the Critical Care Unit. Repeat MRI brain showed new extensive enhancement of the skull base and nasopharynx, and right sigmoid sinus thrombosis. ENT surgeons performed a biopsy of the right post nasal space and histology confirmed granulomatosis. He was treated with three pulses of intravenous methylprednisolone pulses, then oral prednisolone, with improvement in cranial nerve palsies.

Pachymeningitis is thickening of the dural layer of the meninges. It may be caused by infection, malignancy, inflammation, haemodialysis, mucopolysaccharoidosis or neurosarcoidosis. It may present with headaches and cranial nerve palsies. Diagnosis is by MRI brain, lumbar puncture, and biopsy of the meninges.

Neuropathies, including cranial neuropathies are relatively common in GPA, with estimated prevalence up to 25%. However, meningeal involvement is a rare complication of granulomatosis with polyangitis, with only case report evidence as guidance for treatment. Early initiation of immunosuppressive therapy is important, but in this case diagnosis was obscured by the finding of Arnold Chiari malformation on the original MRI.
ANTI-TNFα THERAPY FOR ANKYLOSING SPONDYLITIS

H. Hassan, E. Marzoug, K. Lim
Rheumatology Department, Sherwood Forest Hospitals NHS Foundation Trust

**Background:** Ankylosing spondylitis (AS) is an inflammatory disease primarily affecting the spine. The National Institute for Health and Clinical Excellence (NICE) had published guidance on the use of anti-tumour necrosis factor alpha (anti-TNFα) in severe active AS [1], and recommended that Etanercept, Adalimumab, Infliximab and Golimumab should be considered only in patients who satisfied the modified New York criteria for the diagnosis of AS and had sustained active spinal disease, demonstrated by given scores on the Bath Indices for AS [1, 2].

**Aim:** The aim of this audit was to determine whether our department was adhering to the NICE guidance in prescribing anti-TNFα therapy in patients with ankylosing spondylitis.

**Methods:** We identified 64 AS patients who received anti-TNFα therapy from 05/08/2005 to 31/12/2013. Of these, 18 patients started anti-TNFα therapy prior to the publication of the NICE guidance in May 2008 and were, therefore, excluded. The data collection tool developed by NICE in 2011 [3] was used for data entry. There are 8 standards which summarised the recommendations in the NICE technology appraisals guidance. In this audit we measured our current practice against these standards.

**Results:** In total, 48 AS patients were included in the audit. 93% of patients had met the modified New York criteria for AS and 74% had met the NICE guidelines on confirmation of sustained active spinal disease. Only 13% had the 12-weekly assessments recommended by NICE in the anti-TNFα responders. This significant shortfall was largely because our departmental pathway required 6-monthly response assessments instead of 12-weekly assessments after the first year of anti-TNFα therapy. 35% of non-responders continued anti-TNFα therapy beyond the 12 weeks recommended by NICE. Interestingly, more than a third of the initial anti-TNFα non-responders had responded at the 6-month assessment and had maintained the good response subsequently. Only 20% met the NICE criteria on switching to a second anti-TNFα drug. Two patients, who stopped Adalimumab due to loss of efficacy, responded well when they were switched to Etanercept. Two patients on Etanercept, who developed uveitis for the first time, had no further episodes on switching to Adalimumab.

**Conclusions:** The audit had identified some key areas of good adherence to the NICE guidelines. However, there were several areas for improvement. It also highlighted areas that NICE should reconsider in the future review of the guidelines, particularly with regards to stopping anti-TNFα therapy at 3 months in a non-responder as well as switching of anti-TNFα therapy.
References:


OBSERVATIONAL STUDY OF SEASONAL MONTHLY INFUSIONS OF ILOPROST—CANNOCK EXPERIENCE

Joshi P, Duggal V, Dodd J, Nixon A, Venkata Chalam S, Sheeran T
Rheumatology Unit, Cannock Chase Hospital, Brunswick Road, Cannock WS11 5XY

Background: Iloprost infusions are effective in the treatment of digital ischemia and resistant Raynaud’s phenomenon. Seasonal infusions of Iloprost before and through the winter are very helpful in the management of severe Raynaud’s with inadequate response to the first line therapy with Calcium Channel blockers. There are different regimes for Iloprost infusions, based upon inpatient admission and daily infusions for 5 days, or 3 days. We describe a seasonal monthly infusion service done in a day case setting that offers a more flexible and financially acceptable solution.

Aim: To identify the demographic characteristics of patients on seasonal monthly infusions of Iloprost, their clinical and immunological profile, therapeutic response and side effects.

Methods: This is a retrospective data analysis of all patients attending the Rheumatology day unit for monthly Iloprost infusions before and during winter [3-4 months a year] for resistant Raynaud’s phenomenon in 2013 and 2014.

Results: We had 72 patients who had received the seasonal Iloprost infusions in 2013 and 2014. There were 15 males and 57 females (M: F ratio 1:3.8) with a mean age at starting Iloprost of 50.2 (±15.1) years.

Table 1 Underlying diagnoses in the patient group

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scleroderma- limited</td>
<td>20 (37.8%)</td>
</tr>
<tr>
<td>Scleroderma- diffuse</td>
<td>5 (6.9%)</td>
</tr>
<tr>
<td>Mixed connective tissue disease (MCTD)</td>
<td>10 (13.9%)</td>
</tr>
<tr>
<td>Primary Raynaud’s</td>
<td>10 (13.9%)</td>
</tr>
<tr>
<td>Systemic Lupus Erythematosus</td>
<td>6 (8.3%)</td>
</tr>
<tr>
<td>Undifferentiated connective tissue disease (UCTD)</td>
<td>5 (6.9%)</td>
</tr>
<tr>
<td>RA</td>
<td>4 (5.5%)</td>
</tr>
<tr>
<td>Dermatomyositis</td>
<td>2 (2.8%)</td>
</tr>
<tr>
<td>Miscellaneous (Sjogren’s 1, Overlap 2, Vasculitis 3, Others 4)</td>
<td>10 (13.9%)</td>
</tr>
</tbody>
</table>

Of the patients with scleroderma (n=25), 6 patients had Interstitial lung disease and 2 had Pulmonary Hypertension. Iloprost was commenced as first line in 8 patients (11.1%) who initially presented with a digital ulcer or gangrene. 64 of the 72 patients (88.9%) received calcium channel blockers as initial treatment before Iloprost and 2 of them also received Sildenafil. An initial course of Iloprost for 3 -5 days was given to 13 (18.1%) patients before switching to seasonal monthly treatment.

The seasonal monthly Iloprost infusions were well tolerated by most of our patients and the mean duration of follow up was 3.4 (±2.3) years. The dose of Iloprost was...
adjusted in 6 (8.3%) patients, but 5 (6.9%) patients had discontinued the treatment due to side effects. Three of the 5 patients who discontinued iloprost had it for at least 4 years. All patients found iloprost very useful for alleviating the symptoms of Raynaud’s in winter.

**Conclusion:** Monthly seasonal iloprost during winter is effective and well tolerated in patients with resistant Raynaud’s phenomenon. It is also less expensive than longer courses of iloprost.
MORTALITY IN SYSTEMIC LUPUS ERYTHEMATOSUS IN THE UNITED KINGDOM 1999-2012

Frances Rees1,2, Michael Doherty1, Matthew Grainge3, Peter Lanyon1,2, Graham Davenport4, Weiya Zhang1

1Division of Rheumatology, Orthopaedics and Dermatology, University of Nottingham, 2Rheumatology department, Nottingham University Hospitals NHS Trust, 3Division of Epidemiology and Public Health, University of Nottingham, 4Arthritis Research UK Primary Care Centre, Keele University

Background: Systemic Lupus Erythematosus (SLE) is a multi-system disease associated with significant mortality. In the UK four studies have estimated mortality in people with SLE with differing results. We aimed to estimate the mortality associated with SLE in the UK during the period 1999-2012 including variation with age, gender and region.

Methods: A retrospective cohort study using the UK Clinical Practice Research Datalink. Incident SLE cases were identified during 1999-2012 and matched by age, sex and practice to 4 controls. The case fatality rate was estimated by dividing the number of incident cases who died during the study period by the number of person-years since diagnosis, per 1,000 person-years. Sex, age and region-specific fatality rates were calculated and compared to controls using incidence rate ratios (IRR). For individuals with linked Office of National Statistics(ONS) data, cause of death was summarised by ICD-10 chapter heading.

Results: Of 2,740 incident cases diagnosed during 1999-2012 (85% female, mean age 48.9 years), 227 died giving a case fatality rate of 15.84/1,000 person-years (95% CI: 13.91, 18.04). This was 67% higher than controls (IRR 1.67, 95% CI: 1.43-1.94, p<0.001). The case fatality rate for females with SLE was half that of males (95% CI: 0.40, 0.73, p<0.001). However, compared with controls the fatality rate for males with SLE was 1.80 times that of male controls (95% CI: 1.32-2.45, p<0.001) and for females was 1.64 times higher (95% CI: 1.37-1.96, p<0.001). The age-specific fatality rates increased significantly with age, however, the IRR diminished from 3.81 (95% CI:1.43-10.14) in those <40 years to 0.82 (95% CI: 0.36-1.83) in those ≥90 years. There was no significant difference in mortality between regions. For both cases and controls with linked ONS data (57%), circulatory system disease and malignancy were the most frequent cause of death, however in young people (20-39 years) active SLE was most frequent.

Conclusions: People with SLE had 67% higher mortality than matched controls. Men with SLE had twice the risk of death as women with SLE but this was in part due to the increased mortality in males in general. Those at younger ages had the greatest risk compared with controls. Circulatory system disease and malignancy were the most frequent causes of death in people aged over 40 years and active SLE in those under 40. This highlights the need for primary prevention for cardiovascular and malignancy risk factors in both men and women with SLE, and extra vigilance and timely intervention for SLE flares in young people.

Acknowledgements: This work was supported by a research grant from LUPUS UK.
SONOELASTOGRAPHY AS A NEW IMAGING BIOMARKER IN SPONDYLOARTHRITIS: A PILOT STUDY

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1Rheumatology Research Group, School of Immunity and Infection, University of Birmingham

Background
Sono-elastography (SE) is a novel ultrasound application that quantifies the tissue elasticity (i.e., the degree of tissue stiffness) within an anatomical structure. It provides different biomechanical tissue information that can complement changes that are detected by Grey-Scale Ultrasound (GSUS) and Power Doppler Ultrasound (PDUS).

The aim of this pilot study was to compare SE to GSUS and PDUS in the assessment of enthesitis.

Methods
A total of 40 enthesial sites of patients with SpA were included in the analysis. Bilateral proximal plantar fascia, distal Achilles tendon, distal and proximal patellar tendon insertion and distal quadriceps tendon were systematically scanned.

GSUS and PDUS were graded based on the validated Madrid Sonographic Enthesis Index (MASEI) scoring system [i.e., calcification, power Doppler enhancement, erosions, tendon structure, tendon thickness and bursa was scored on a semi-quantitative scale of 0-3]. The sensitivity and specificity of SE, GSUS and PDUS were compared with clinical examination as the reference standard.

Results
SE grading strongly correlated with PDUS grading ($r_S=0.852$, $p<0.01$), and combined GSUS/PDUS gradings ($r_S=0.716$, $p<0.01$). The sensitivity of SE and combined GSUS/PDUS were identical when compared to the reference standard; 71.4%. In contrast the specificity of SE was 63.2% and combined GSUS/PDUS was 26.3%, when compared to the reference standard.

Conclusion
This is the first study to compare SE with conventional US for the detection of enthesitis in SpA. SE had a greater specificity compared to conventional US and a comparable sensitivity in the detection of enthesitis in SpA.
A CROSS-SECTIONAL SURVEY ON INFLAMMATORY BACK PAIN: A COMMON FINDING IN PATIENTS WITH CHRONIC BACK PAIN?

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Alan G Wade FRCA, Director, Patients Direct, G20 0XA, UK
Gordon M Crawford MRCGP MRCP, Director, Patients Direct, G20 0XA, UK

Objectives
- To assess number of patients who met the standard criteria for inflammatory back pain (IBP) within a cohort of patients with Chronic Back pain.
- To evaluate the treatment they received

Methods
A cross-sectional survey of adults (≥18 years) with chronic back pain for more than 3 months was conducted between December 2013 and May 2014 to identify patients with IBP. The survey consisted of an online questionnaire–based survey supplemented by telephone response. Respondents were recruited throughout the UK using social media (Facebook) and national newspaper (Daily Mail) advertisements.

The primary outcome measure was the number of respondents with chronic back pain who fulfilled the ASAS and Calin diagnostic criteria for IBP. Other outcome measures included demographic data and analgesic medications.

Results
The total number of recruited adults who completed the survey was 586; 77.6% were through Facebook, 15.5% through newspaper advertising, and the rest were friends and others. Over three-quarters of respondents (77.6%) were female. Facebook respondents (mean, 40.5 years; median, 41.0 years) were younger than newspaper respondents (mean, 68.0 years; median, 68.0 years).

Of the 586 respondents with chronic back pain, 52.0% satisfied the criteria for IBP, with 50% meeting the Calin criteria and 21% meeting the ASAS criteria. 110 patients met both criteria (19%). Of the 305 respondents with IBP, 89% were younger than 40 years at onset, 77% were female, and 65% had experienced back pain for more than 5 years.

Overall, 27% of respondents reported having been informed by at least one healthcare professional that their back pain was associated with inflammation. Of these, 89 (57%) met the Calin criteria and 39 (25%) met the ASAS criteria. The 39 respondents meeting the ASAS criteria had been informed of the inflammatory nature of their condition by a variety of healthcare professionals. 32 of the 39 respondents (82%) meeting the ASAS criteria reported extra-articular manifestations, including enthesitis (46%), uveitis (38%), inflammatory bowel disease (30%), arthritis (26%), psoriasis (23%), and dactylitis (18%).

Of the 39 respondents, 85% had been prescribed painkillers, 77% anti-inflammatory painkillers, and 5% other medications; 10% were not receiving any prescription medication.
Conclusions

- IBP was a relatively common finding in our cohort of patients with chronic back pain, with 21% satisfying the standard ASAS criteria for IBP.
- The social media respondents represented a younger population, which suggests that raising awareness of IBP through social media may help to avoid delay in diagnosis.