Edition 1 \ Summer 2017

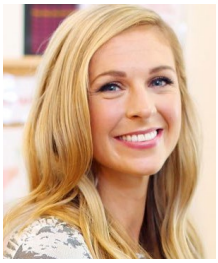
ARTHRITIS RESEARCH UK

JOINT MATTERS

We are delighted to introduce the first edition of Joint Matters; the new clinical update from Arthritis Research UK. Joint Matters will be providing short, topical features from the world of musculoskeletal health, keeping you up to date with the latest clinical information, developments and conversations. Our research shows that there are approximately 2.8 million people with arthritis in the UK, who are struggling with their condition and seeking information and advice. The overwhelming majority of these people will turn to a healthcare professional for this support. If you are providing care for people with musculoskeletal conditions, then Joint Matters is for you.

We know arthritis is often regarded as an 'invisible' condition. For the many millions of people affected by the debilitating physical and emotional symptoms, the fact that the true impact is unseen and misunderstood can make living a full and independent life with a musculoskeletal condition even more challenging. People with arthritis do not get the help, support or understanding that they need to help them to live well. We want to change that. We want to change the way that arthritis is perceived by wider society and make it visible as a long-term condition that affects over 10 million people in the UK. So, this summer, 2017, Arthritis Research UK will be launching a media campaign, including advertising, to raise awareness of the impact that arthritis can have on individuals and wider society.

We hope that you enjoy the first edition of Joint Matters, and we welcome any feedback or comments. Additionally, if you are interested in contributing to the next edition of Joint Matters, we would love to hear from you. Please get in touch with us at professionalengagement@arthritisresearchuk.org



Kate Croxton, Head of Professional Engagement, Arthritis Research UK

Neil Snowden, Consultant rheumatologist, Medical editor for Joint Matters

1 PATIENT REPORTED OUTCOME MEASURES AND CHOOSING A HOSPITAL

Dan Williams, Consultant Orthopaedic Surgeon

PROM SCORES CAPTURE WHAT REALLY MATTERS TO PATIENTS

Patient Reported Outcome Measures, or PROMs, are questionnaires (completed by patients) which assess what really matters to those patients.

For hip or knee arthritis, meaningful PROMs need to measure aspects of pain and function relevant to people with arthritis at those sites, and be sensitive to any change that occurs after an intervention such as joint replacement. The UK Department of Health has adopted the Oxford Hip and Knee Scores to assess outcomes after hip and knee replacement in the NHS. Each consists of twelve questions, which ask about aspects of pain and function, such as; pain severity, walking distance, difficulty climbing stairs and difficulty getting in and out of the car. The two PROMs are similar but are individually adapted to the problems that come with hip or knee arthritis.

Each of the 12 answers is scored from 0 to 4 and the total Oxford score is measured out of 48 points. The worst score possible is 0/48 and the best score, for someone with no pain and full function, is 48/48.

All hospitals performing hip or knee replacement in England and Wales take part in the National PROMs Programme, collecting these Oxford scores before and six months after surgery. The scores are collected together from all patients and the gain in health score for a particular hospital or group of patients is made available online at http://content.digital.nhs.uk/proms.

See the following links for gain in pain and function PROM scores following hip and knee replacement at different hospitals across the NHS up until September 2016. Some of the recent data remains incomplete and provisional.

PROMs describe what pain and function is going to be like on average after joint replacement and help to answer the question "Is my pain and function going to be better?" So, while it is important to know about waiting times and MRSA infection rates at your local hospital, PROM scores capture what really matters to patients.

Figure 1 Arthritis Research UK PROM- Musculoskeletal Health Questionnaire (MSK-HQ)

The Oxford Hip and Knee scores are specifically designed for use in people with arthritis at those particular sites, and have been valuable in looking at the impact of interventions like joint replacement.

ARTHRITIS RESEARCH UK HAS RECENTLY DEVELOPED A PROM THAT CAN BE USED IN ANY MUSCULOSKELETAL CONDITION:

MSK-HQ This is designed as an overall measure with the potential to become in musculoskeletal health what the "blood pressure" is in cardiovascular health, or the blood sugar marker "HbA1c" in diabetes: an essential measure of musculoskeletal health that can be used throughout health systems for the benefit of people with musculoskeletal conditions. More information about MSK HQ, can be found at: http://www.arthritisresearchuk.org/MSKHQ

2 MANAGEMENT OF THE NON-TRAUMATIC PAINFUL SHOULDER

Nashat Siddiqui, Consultant Orthopaedic Surgeon

Lifetime prevalence of shoulder pain in adults is up to 67%, mainly due to problems with the rotator cuff tendons, either impingement of the tendons in the sub-acromial space or structural lesions within the tendon[1] (commonly known as "tears" but are usually non-traumatic and more like "wear and tear"). There may be a history of overuse or low energy movements with sudden pain. The patient's age is a guide [fig. 2].

Instability without trauma is usually due to muscle dysfunction, often with hypermobility. Treatment is usually with physiotherapy. Less common are anatomical abnormalities that may need surgery.

NON-TRAUMATIC SHOULDER PAIN ACTUALLY DECREASES OVER THE AGE OF 65

Initial treatment of subacromial impingement should be with analgesia/ NSAIDs and physiotherapy. Continued pain may need a subacromial steroid injection. Surgery is reserved for persistent and refractory symptoms. Degenerate cuff lesions increase over the age of 50, whereas the incidence of non-traumatic shoulder pain actually decreases over the age of 65[1]; the presence of a cuff "tear" does not always cause pain.

MRI (gold standard)[2] or ultrasound is needed to exclude cuff lesions in patients with weakness or pain on stressing the rotator cuff. They may need to be referred for consideration of surgery, as steroid injections may reduce the success rate of cuff repair surgery[3,4].

Persistent pain and global restriction is often caused by frozen shoulder (adhesive capsulitis). This is usually self-limiting, lasting up to two years. It evolves through a painful "freezing" phase, a stiff "frozen" phase, and a painless "thawing" phase. It may co-exist with subacromial impingement.

Physiotherapy may help, augmented by intra-articular steroid injections +/- saline distension (hydrodilatation)[5]. Manipulation under anaesthetic or capsular release surgery may be needed.

Older patients may have pain and stiffness due to arthritis. There may be crepitus, and weakness if there are cuff defects. Shoulder replacement surgery has good results but has risks and may eventually need revision. Steroid injections increase the risk of infections in shoulder replacement[6] and should be avoided unless the patient is unsuitable for surgery.

Figure 2 **Pathology stratified by age**

Age	Common pathology	Less common pathology
<30	Instability	
30-50	Subacromial impingement	Frozen shoulder
50-65	Cuff pathology	Frozen shoulder
65+	Subacromial impingement	Osteoarthritis

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3

COULD THERE BE A NEUROPATHIC ELEMENT TO THIS PAIN? TOOLS TO HELP THE CLINICIAN

Rob Hampton, GP, Occupational Physician and GPSI in MSK Pain Management

As a GPSI and Occupational Physician, I am often concerned at how frequently clinicians fail to consider a neuropathic element to long term musculoskeletal pain, with consequent lack of explanation and treatment. When surveyed, 66% of GPs reported difficultly making this diagnosis[1]. Most acute pain is nociceptive, a consequence of tissue injury. In contrast, neuropathic pain is a disorder of the somatosensory system within the CNS. Long term pain can be a combination of the two. It is estimated that 40% of people with low back pain have a neuropathic element[2]. I would advise clinicians to consider a neuropathic element to symptoms if pain persists six weeks beyond injury or the onset of spontaneous symptoms.

CLINICIANS FAIL TO CONSIDER A NEUROPATHIC ELEMENT TO LONG TERM MUSCULOSKELETAL PAIN

My experience is that recognition of neuropathic pain can be a rewarding aspect of clinical practice, providing reassurance that there is no other "undiscovered" problem. I have seen people return to work within a few days once they grasp the concept and realise that leading a normal life will help to improve symptoms. Recognising neuropathic pain also provides options to use NICE recommended medication, such as amitriptyline or a gabapentinoid[3] and an opportunity to reduce opioids.

There are several tools available to help with diagnosis. I would recommend two for UK Clinicians. PainDETECT is free to use download from: https://www.pfizerpatientreportedoutcomes.com. It is user friendly with extensive use of colour and a pain map. Clinical skills are not required to complete the questionnaire and no examination is required. It is the ideal questionnaire to give to patients for completion and reflection at follow-up consultation. The Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) has 5 symptom items and 2 clinical examination items to assess allodynia and altered pin-prick threshold. Although easy to score within clinical setting it does require clinical expertise to complete.

Although ultimately the diagnosis of a neuropathic element to pain relies on clinical acumen, these tools are useful to guide the Clinician and can open dialogue to support patients to better manage their long term musculoskeletal pain.

References

1 Markman et al. (2004) Patient flow in neuropathic pain management: Understanding existing patterns of care. Eur J Neuro 11(Suppl 2):135–6

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Figure 3 Neuropathic, mixed and nociceptive pain

Nociceptive pain

Occurs as a result of tissue disease or damage with a functional intact sensory nervous system. Conditions that result in tissue damage and can include:

- Osteoarthritis
- Rheumatoid arthritis
- Ankylosing spondylitis

Mixed pain

Examples include:

- Lower back radiculopathy
- Cancer pain
- Carpal tunnel syndrome

Neuropathic pain

Occurs due to an injury or disease affecting the somatosensory system. Can originate from numerous causes including:

- Painful diabetic neuropathy
- Post surgery neuralgia
- Spinal cord injury

4 MUSCULOSKELETAL HEALTH AND EXERCISE

David Pilbury, Clinical Specialist Physiotherapist-Rheumatology

When discussing musculoskeletal health, David Butler, the notable Pain Physiotherapist and lecturer, came up with a phrase that has stayed with me and shaped my clinical practice ever since: "You have acid in your tissues". He said this about the fidgeting we all experience when we sit for too long. This highlights the need for tissues to receive nourishment, move and be used. In much the same way that we can't expect plants to survive without care and attention, our bodies need certain things to thrive – this includes exercise.

In an age where people are living longer, with higher levels of diabetes, cardiovascular disease and obesity, it's essential for the public health that we, as musculoskeletal clinicians, do all we can to reduce the impact of ageing and illness. Research has looked at amount, type and intensity of exercise in helping manage conditions such as Rheumatoid Arthritis and Osteoarthritis. A key question is, which are more important- particular types of exercise or engagement of individuals? In fact, both are important. Tailoring exercise regimes to individuals is crucial but it is also vital they choose exercise that they enjoy and will sustain as they embark on a journey using exercise to improve musculoskeletal health. As clinicians, I'm sure we have all heard stories from patients regaling tales of harmful advice they have been given in the past. We have the power to encourage, empower and support. Managing long-term conditions is challenging. We have the UK Chief Medical Officers' Guidelines (2011 revised 2016) which are useful.

We must keep in mind that our role is to encourage and reinforce good behaviours, challenge unhelpful beliefs, offer support and provide opportunities to access facilities or services. Motivational interviewing is a useful tool which helps with patient engagement and self-preservation as medical professionals. It's essential to keep abreast of evidence, access specialist professionals and the local services available to us.

OUR BODIES NEED CERTAIN THINGS TO THRIVE – THIS INCLUDES EXERCISE.

Figure 4 Department of Health infographic on physical activity (2016)

UK Chief Medical Officers' Guidelines 2016 **Start Active, Stay Active**

5 CARDIOVASCULAR COMORBIDITY IN RHEUMATOID ARTHRITIS

Audrey Low, Consultant Rheumatologist

The most obvious impacts of Rheumatoid arthritis (RA) are musculoskeletal. However, RA is also associated with substantial cardiovascular (CV) morbidity and mortality.

Factors influencing cardiovascular morbidity and mortality in RA

Several factors contribute to the increased CV risk in RA. Firstly, myocardial infarction (MI) may present differently in RA. People with RA may experience 'silent' ischaemia or atypical chest pain, resulting in under-recognition and under-treatment of (MI). Also, people with RA may not have typical electrocardiogram (ECG) features of acute MI[1].

SEVERAL FACTORS CONTRIBUTE TO THE INCREASED CV RISK IN RA

People with RA are more likely to die after MI than those without RA[1]. This may reflect differences in treatment. Although, some studies found no difference in treatment for MI[1], one study found people with RA were more likely to receive thrombolysis and percutaneous intervention (PCI) and others found people with RA received fewer interventions and less secondary preventative drug therapy post-MI compared to the general population[1].

The burden of atherosclerosis (the frequency of multi-vessel disease) is greater compared to non-RA controls undergoing PCI[1]. A post-mortem study compared coronary artery disease in people with and without RA and found no difference in the severity of stenoses. However, the composition of the atherosclerotic plaque was different in RA, containing more inflammatory cells than -those from non-RA patients, suggesting that RA plaques could be more unstable and liable to rupture.

Predictors of CV risk

Traditional CV risk factors (e.g. smoking, hypertension, diabetes, lipids) may have a greater impact on overall CV risk in RA compared to people without RA because of modification by the inflammatory process. For example, the relationship between lipid levels and CV risk is non-linear in RA, unlike the general population. In patients with high disease activity and inflammation, there is an adverse shift in lipid profile (increased ratio of total to HDL cholesterol), increasing CV risk. However, traditional CV risk factors cannot fully explain increased CV risk. Inflammation and autoimmunity themselves (demonstrated by raised levels of inflammatory markers such as ESR), and CRP, autoantibodies (rheumatoid factor and anti-cyclic CCP) or extra-articular features) were associated with increased CV risk.

Influence of drug treatment for RA on CVD risk

Drugs such as methotrexate and biologic therapies appears to confer reduced CV risk though this is not eliminated completely. Cumulative disease activity and disease flares increase CV risk; conversely, suppression of disease activity by any means decrease CV risk.

Figure 5 EULAR recommendations for CV risk management[2]

1	Disease activity should be controlled optimally in order to lower CVD risk in all patients with RA, AS or PsA.
2	CVD risk assessment is recommended for all patients with RA, AS or PsA at least once every 5 years and should be reconsidered following major changes in antirheumatic therapy.
3	CVD risk estimation for patients with RA, AS or PsA should be performed according to national guidelines and the SCORE CVD risk prediction model should be used if no national guideline is available.
4	TC and HDLc should be used in CVD risk assessment in RA, AS and PsA and lipids should ideally be measured when disease activity is stable or in remission. Non-fasting lipids measurements are also perfectly acceptable.
5	CVD risk prediction models should be adapted for patients with RA by a 1.5 multiplication factor, if this is not already included in the model.
6	Screening for asymptomatic atherosclerotic plaques by use of carotid ultrasound may be considered as part of the CVD risk evaluation in patients with RA.
7	Lifestyle recommendations should emphasise the benefits of a healthy diet, regular exercise and smoking cessation for all patients.
8	CVD risk management should be carried out according to national guidelines in RA, AS or PsA, antihypertensives and statins may be used as in the general population.
9	Prescription of NSAIDs in RA and PsA should be with caution, especially for patients with documented CVD or in the presence of CVD risk factors.
10	Corticosteroids: for prolonged treatment, the glucocorticoid dosage should be kept to a minimum and a glucocorticoid taper should be attempted in case of remission or low disease activity; the reasons to continue glucocorticoid therapy should be regularly checked.
	Abbreviations: AS, ankylosing spondylitis; CVD, cardiovascular disease; EULAR, European League against Rheumatism; HDLc, high-density lipoprotein cholesterol; NSAID, non-steroidal anti-inflammatory drug; PsA, psoriatic arthritis; RA, rheumatoid arthritis; SCORE, Systematic Coronary Risk Evaluation; TC, total cholesterol.

Impact upon clinical practice – what can we do?

Recently, the European League Against Rheumatism (EULAR) published recommendations for CV risk management[2] (Fig 5) these require close collaboration between primary and secondary care. The recommendations are straightforward and should form part of daily routine clinical practice. For RA, the NHS quality outcomes framework (QOF) for 2017/2018 makes provision for maintaining a register of patients with RA and face-to-face review.

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For further information, please contact:
professionalengagement@arthritisresearchuk.org
Arthritis Research UK
Copeman House
St Mary's Gate
Chesterfield
S41 7TD

arthritisresearchuk.org

@ArthritisRUK
arthritisresearchuk

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