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Osteoarthritis

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Key Words:

Osteoarthritis, OA, Joint pain, Core treatments

Key Points:

- There is a gap between what is recommended and what is delivered in primary care for patients with osteoarthritis
- General practice and practice nurses are well placed to support the self-management of osteoarthritis
- There is great similarity in approach between supporting self-management for osteoarthritis and that of many other long-term conditions
- In their 2014 OA guidelines, the National Institute for Health and Care Excellence (NICE) recommend a number of core and adjunctive treatments

Introduction

The most common form of musculoskeletal (MSK) condition is arthritis, with osteoarthritis (OA) being the most common form of arthritis and the most common cause of peripheral joint pain in adults aged 45 years and over (Felson, 2009). OA is recognised as being a leading cause of pain and morbidity globally and has become the fastest increasing cause of disability (Vos et al, 2012). The National Institute for Health and Care Excellence (NICE, 2014) define OA as a syndrome of "joint pain accompanied by varying degrees of functional limitation and reduced quality of life (QoL)"; for this reason, the terms joint pain in older adults and OA are often used interchangeably. OA is a long-term condition (LTC) and, as the primary source of formal medical advice, primary care is the optimal setting to deliver care for affected patients. However, despite its impact on the QoL and daily functioning of its patients, and its prevalence among primary care populations, care for OA is frequently poorly aligned to evidence-based recommendations and patient's health care needs can go unmet (Lester et al, 2011). Furthermore, OA is often not prioritised among primary care professionals and has never formed part of the Quality and Outcomes Framework (QOF). However, this can and should change, as there are a spectrum of evidence-based treatments and self-management advice that can be recommended for affected patients (Morden et al, 2014). In this article we look at current clinical recommendations for the care and management of OA and discuss the role of the practice nurse in caring for patients with this condition.

So what is OA?

OA is a whole joint disease, which means pain can arise from different structures of the affected joint at different times within and between patients. While it is often misrepresented as 'wear and tear', and simply something to be accepted as part of the ageing process, we

know this is an inaccurate and overly simplistic description of this complex disease. OA is a pathophysiological response by the joint to a mechanical stress or force in which the joint is attempting to naturally repair the damage caused by that force (Brandt et al, 2009). OA should no longer be considered as purely degenerative (Aspen, 2008; Lane et al, 2011), as it is known to be a dynamically active process involving joint damage and repair (Aspen, 2008; Dieppe et al, 2011; Lane et al, 2011).

However, repair does not mean renewal back to the joint's original structure, but rather repairing of inflammation, pain and function. When a joint develops OA, part of the cartilage becomes thinner and the surface becomes rougher. This affects movement and the joint no longer moves as smoothly as it should. When cartilage becomes thinner or damaged, the tissues within the joint become more active than normal as the body tries to naturally repair the damage. The repair processes may change the structure of the joint, but will often allow the joint to work normally, often without any pain and stiffness (Versus Arthritis, 2018). This explains why many people with OA do not experience inevitably declining symptoms, we know that while flares of symptoms are common, progressive deterioration is not (Nicholls et al, 2014).

In those most severely affected by OA the repair processes become ineffective at restoring pain and function, and there can be resulting breakdown in cartilage and bone (Dieppe et al, 2011). This breakdown in cartilage and bone results in pain, stiffness, osteophyte (spur) formation and functional disability (Lane et al, 2011).

Prevalence

OA can develop in any joint but is most commonly featured in the hands, hips, knees and feet. There are an estimated 8.5 million adults in the United Kingdom (UK) with joint pain and disability attributed to OA, and by 2030 this is expected to rise as half of the population will be over 50 and nearly the same proportion will be obese; leading to an estimated 17 million people in the UK living with OA (Arthritis Care, 2012). One-in-ten older adults will consult in primary care each year for clinical OA (recorded OA or peripheral joint pain) (Jordan et al, 2014). OA may be localised to one joint, to a few joints (which could be attributed to the same site i.e. hands and feet) or generalised to several bigger joints (Abhishek and Doherty, 2013).

Arthritis Research UK (ARUK, 2013), in their report 'Osteoarthritis in General Practice' were able to identify prevalence from seven years of primary care data for OA in the peripheral joint sites of the hands, hips, knees and feet in adults aged 45 years and over (table 1).

Table 1 Osteoarthritis in the peripheral joint sites

Site of OA	% of those aged 45 and over who have sought treatment	Number of people who have sought treatment	Fraction of people who have sought treatment for OA for a specific site
Hand and Wrist	6%	1.56 million	1:6
Hip	8%	2.12 million	1:4
Knee	18%	4.71 million	1:2
Foot and Ankle	7%	1.77 million	1:5

Recommendations

NICE (2014) in their OA guideline suggest that OA is still not managed optimally with disparities between what is recommended and what is actually delivered. Those suffering with the symptomatic joint pain of OA often still consider joint replacement as the best option for the management of the condition (Croft et al, 2011). However, most people seen in primary care will not have the most severe symptoms of OA, as most of the disability attributed to the condition is generated by a large number of people who have less severe osteoarthritic joint pain and are working age adults (Dziedzic et al, 2009). It has also been recognised that the majority of those suffering with OA and joint pain often do so with pain in multiple pain sites concurrently (Finney et al, 2017). The challenge in primary care therefore is how best to manage joint pain and OA for the majority of people (Croft et al, 2011).

NICE (2014) recommend that all people with OA be offered three core treatments when they first present with the condition; i) education and access to information; ii) advice on local muscle strengthening exercises and general aerobic fitness; and iii) if appropriate, advice on losing weight. For both patients and clinicians what is clear from these recommendations is that there is a range of simple interventions for which there is evidence for clinical benefits. However, when patients consult for OA they frequently leave the consultation believing that little can be done or that OA is an unimportant condition (Morden et al, 2014).

Management: The Core Treatments

The aim, when managing OA, is to reduce joint pain and joint stiffness, maintain and improve joint mobility, limit the progression of joint damage and maximise QoL. Before considering

pharmacological approaches, the three non-pharmacological core treatments are firstly recommended.

-Education and access to information

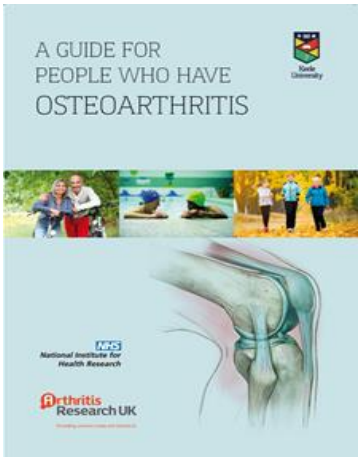
The specific NICE recommendations for education and self-management suggest that clinicians should offer accurate verbal and written information to people with OA, to enhance understanding of the condition and its management, and to counter misconceptions, such as OA cannot be treated (NICE, 2014). The guideline also emphasises the importance of information sharing, suggesting it becomes a continuous part of the management plan rather than a single event at time of presentation (NICE 2014). The common misconception amongst those with OA is that joint pain is a natural part of ageing and that nothing can be done. This belief can lead to a reduction in activity (due to the misconception that activity, which causes pain, is damaging to the joint) and an eventual loss of muscle tone and general conditioning. Practice nurses must therefore correct these inhibitive beliefs and start by using the term 'osteoarthritis' or 'OA' explaining to the patient what it is. Try to elicit the patient's understanding of OA and how it affects them i.e pain and function. Discuss how they currently self-manage their condition, provide positive reinforcement about what they already do whilst checking what else they and you might be able to do to help. Try to set some achievable goals to increase their confidence with the everyday tasks they might be struggling with.

Provide the patient with evidence based advice and guidance. Supply them with positive written information or websites that will reinforce the core treatments. Versus Arthritis (formerly Arthritis Research UK and Arthritis Care) offer a range of patient written information such as leaflets or booklets and a great patient website www.versusarthritis.org

Keele University have also produced a patient guidebook written by patients for patients which has many tips for those newly diagnosed (figure 1).

www.keele.ac.uk/media/keeleuniversity/ri/primarycare/pdfs/OA_Guidebook.pdf

Figure 1. Keele OA guidebook



-Exercise and general aerobic fitness

Exercise reduces pain and improves function among patients with OA (Uthman et al, 2014). Patients can hold the misconception that they are required to use a gym or undertake rigorous exercise to achieve anything, this needs to be dispelled. Patients may also fear that any exercise you suggest may increase pain or damage the joint further as this is commonly the experience of patients with this condition, which typically causes activity-related pain. Therefore, advice to exercise must be tailored to the patients' needs and abilities and accompanied by acknowledgement of (and suggestions to manage), but reassurance about, activity-related pain. A simple way to overcome a barrier to patients' exercising is to refrain from using the word 'exercise' and instead use the term 'physical activity'. In doing this you can recommend walking and other day to day activities that some patients do not consider to be the exercise required. You can support patients to build increasing levels of activity into their daily life. Goal setting is a useful technique to work in partnership with the patient to

agree and achieve realistic goals for physical activity. Improving aerobic fitness through physical activity will improve muscle strength around the joint which will improve function and the joint as a whole (Warburton and Finney, 2016). Evidence suggests that further to this, muscle strengthening and aerobic exercises can reduce joint pain, improve joint function, improve balance, and improve sleep quality (Byers Kraus and Doherty, 2010).

-Weight Management

A vicious circle of symptoms often leads to weight gain rather than weight loss in those with OA as joints become more stiff and painful and patients undertake less exercise, resulting in weight gain, increased pain and difficulty exercising (Ryan, 2014). Weight loss is not easy, especially in those with OA of the knee and hip but it can lead to reduced pain and improvement in physical function (Bijilsma et al, 2011). There is further evidence that weight loss can also demonstrate structural improvement of cartilage (Richette et al, 2011).

Alongside OA, advice and support on weight loss can be endorsed for other co-morbid conditions such as diabetes, where the benefits of weight loss will improve outcomes for both conditions. Weight loss guidance can also be supported with sign-posting to commercial weight management services. Commercial providers such as Weight Watchers and Slimming World have been shown to be effective for long term weight loss and help to alleviate some of the pressure from primary care clinicians (Woadden and James, 2018).

Pharmacological interventions

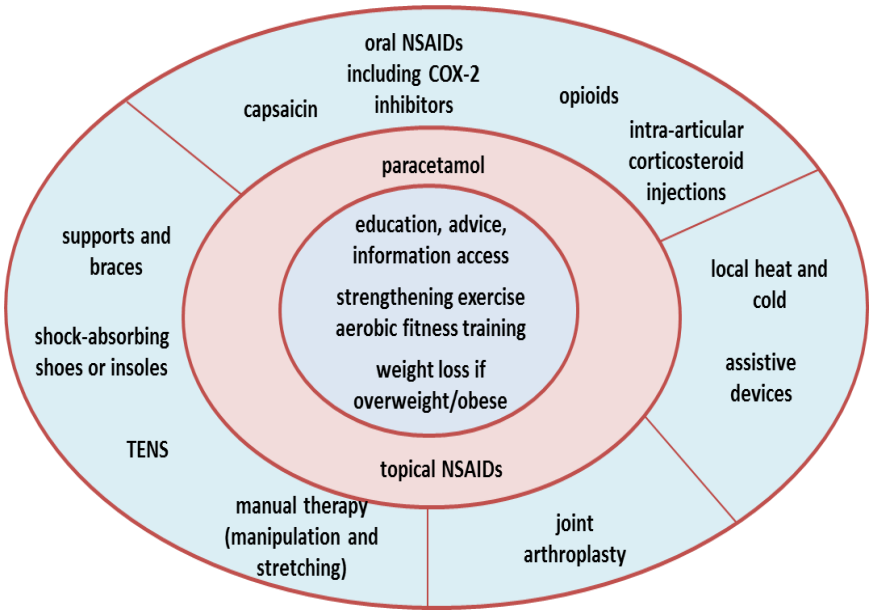
Pharmacological interventions are seen as adjunctive to the core treatments (Figure 2.). First line pharmacological treatments are paracetamol and topical non-steroidal anti-inflammatory drugs (NSAIDS). There is however, growing evidence that paracetamol is not as

safe or as effective as first thought (Doherty et al, 2011). Other topical medication such as Capsaicin can be effective for smaller joints such as the hands but cannot be purchased over the counter. Users of Capsaicin should read the application directions carefully and test a small amount on the skin before use as it uses heat in its analgesic actions. Opioids can be used but should be used with caution, particularly the risks to older people (NICE, 2014). Intra-articular injections can provide effective but short-term relief from pain which may support patients to engage with exercise.

Joint replacement (Arthroplasty)

While it is now recognised that joint replacement is not the eventual outcome for all patients with OA, when they are required they have the best outcomes if they are offered before functional limitations and severe pain occur (NICE, 2014). It is recommended that patients undertake core-treatments before being referred for consideration for joint replacement. Outcomes for both hip and knee replacement are generally positive and therefore arthroplasty can be offered irrespective of age, sex, lifestyle of the presence of co-morbidity. The decision to under go surgical joint replacement should be a shared decision between the person with OA, the clinician and the orthopaedic surgeon (Ryan, 2014).

Figure 2. NICE 2014 OA treatments



Beyond the core treatments NICE (2014) also recommend that people with symptomatic OA should have periodic reviews tailored to their individual needs, and that clinicians should formulate a management plan with the person who has OA, where the risks and benefits of treatment options are communicated to the patient in ways that can be understood (NICE 2014). This is an excellent role for a practice nurse to undertake, echoing other chronic disease management.

UK initiatives (This section could be an additional box)

A UK implementation study, JIGSAW (Joint Implementation of Guidelines for oSteoArthritis in the West Midlands), uses four key innovations delivered to improve the care of people with joint pain in general practice:

- An OA e-template embedded into clinical I.T. systems which prompts high quality care aligned with evidence-based recommendations and supports standardised recording of care provided

- A practice nurse training package

- A 'model' consultation approach

- An OA patient guidebook

Implementation of JIGSAW in UK primary care combines OA core treatments with an enhanced nurse role.

A two-day training package gives practice nurses the knowledge, skills and confidence to implement the NICE recommendations for OA. The content of the training includes:

- Understanding and diagnosing OA, with an awareness of other conditions and 'red flags'
- Exploring the impact of OA on a patient's life
- Giving patients a clear diagnosis and explanation of OA
- Giving positive messages about the natural history of OA and its management options
- Guiding patients about: pain relief, exercise, weight management and providing good written information and other resources
- Supporting self-management through agenda and goal setting and review
- Using 'real patient' OA consultation simulation

The interactive training utilises the knowledge and experience of participants and explores how management of OA fits with current management of long-term conditions in UK primary care.

Conclusion

The management of OA shares similarities with other long-term conditions in UK primary care and can therefore sit comfortably alongside the roles and activity of practice nurses. There are many interventions that can help people with OA to manage their symptoms more effectively but practice nurses need to help patients to meet this challenge by taking the first steps and making OA management part of their portfolio of skills.

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