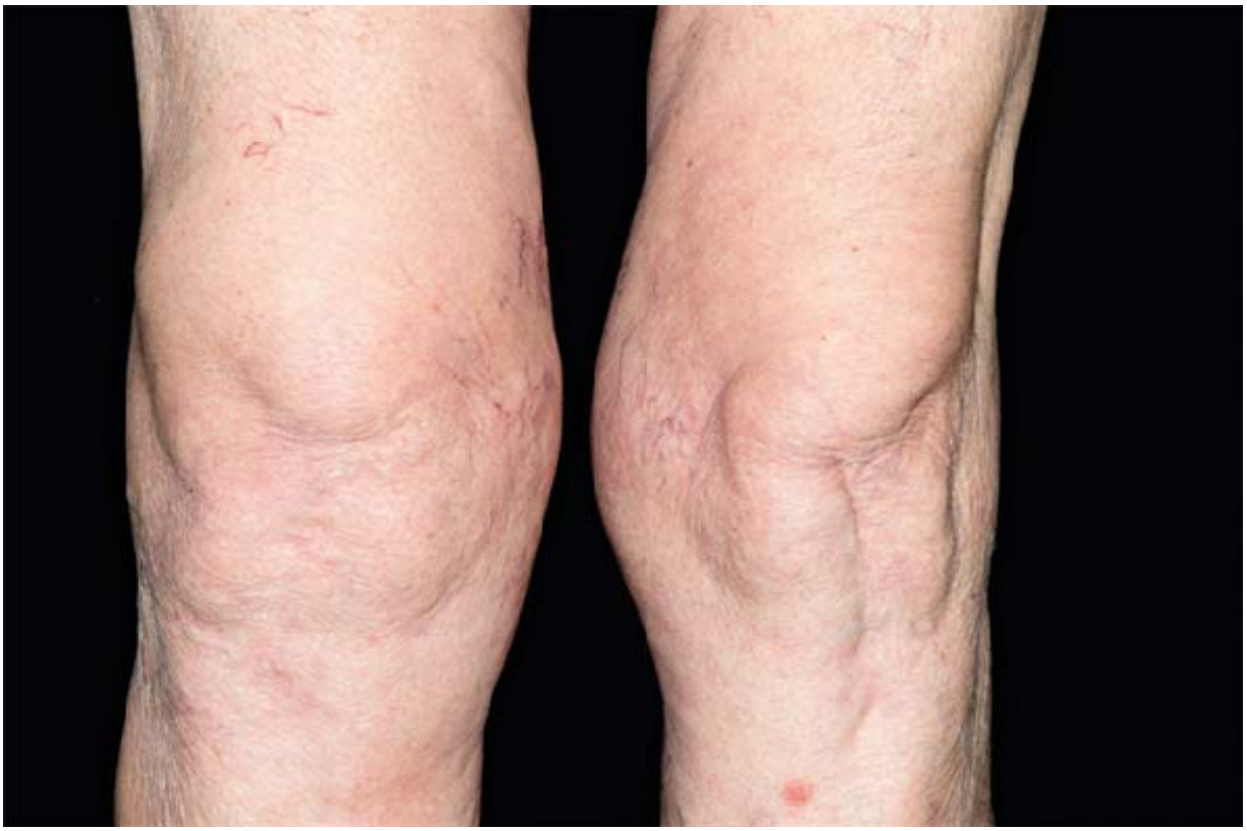
Treatment options in osteoarthritis

Dr Tom Margham discusses the goals of treatment for patients with osteoarthritis



OA: treatment should focus on symptom management (SPL)

Case study

Mrs Jones is a 74-year-old woman with type 2 diabetes, hypertension and stage 3 chronic kidney disease. She has come to see you about her painful knees. She has been experiencing increasing pain for the past five months, such that it is now interfering with her sleep and everyday activities. You diagnosed osteoarthritis (OA) four years ago and she has been managing well since, using topical NSAIDs and occasional paracetamol, having tried co-codamol, which made her feel sick. How would you manage this patient further?

This is a familiar presentation in primary care and most GPs recognise the limits to what we can offer patients requiring medication for OA pain.

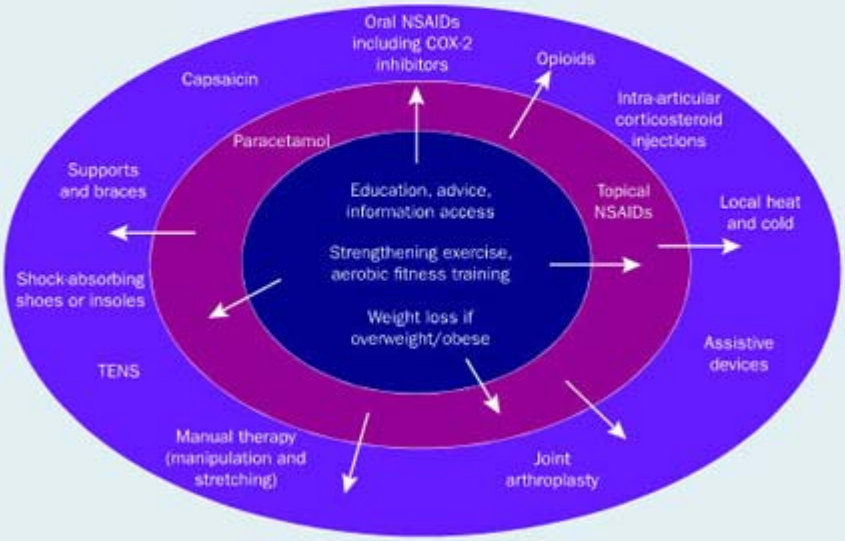
Oral NSAIDs are usually not advised, topical agents are modestly effective and paracetamol is often of limited value and not without its safety problems.

The lack of drug options for OA forces us to be more creative in the ways we can help patients to manage their joint pain.

The recent NICE guidelines highlight the wide range of non-drug treatments for OA (see figure 1), from supports, bracing and insoles, through to manual therapy (especially for hip OA) and devices such as tap-turners or washing aids.[1]

Figure 1: Model for treatment options in OA

Take a holistic approach in assessing the impact of OA



Core treatments
- Education, advice and information access
- Strengthening exercises
- Weight loss if patient is overweight/obese

Non-pharmacological treatments
- Application of local heat or cold
- TENS
- Bracing, joint supports, insoles
- Walking aids

Pharmacological treatments
- Paracetamol and topical NSAIDs
- Oral NSAIDs, COX-2 inhibitors and opioids
- Capsaicin
- Intra-articular corticosteroids

Surgical referral
- Should be made before prolonged or established functional limitation occurs or severe pain is felt
- Should be considered regardless of age, obesity or other comorbidities

Source: NICE CG177

My approach is pragmatic, aiming for a combination of management options which, while the individual effect-size may be small, may have an additive effect. Another guiding principle is that treatments for OA should ideally be simple, effective, cheap and self-administered.[2]

An important consideration is that when we talk about treating OA, with the exception of joint arthroplasty, we do not mean disease-modifying treatments as such. Instead,

the goals of treatment focus more on symptoms, impact on function and quality of life (see box 1).

Box 1: Osteoarthritis

Goals of treatment

- Reduce pain
- Improve function
- Increase mobility
- Improve wellbeing

Clinical diagnosis

Diagnose OA clinically without investigations if the patient:

- is aged 45 or over *and*
- has activity-related joint pain *and*
- has either no morning joint-related stiffness or morning stiffness that lasts no longer than 30 minutes

Core treatments

Central to the NICE recommendations are the core treatments of exercise, weight loss (if overweight), education, advice and access to information. GPs should be expert at advising these to all of our patients with OA and this article will focus on these core treatments.

Effective treatment starts with a positive diagnosis and this can be reached following a clinical assessment and without the need for X-rays in most cases (see box 1).

A positive diagnosis of OA, rather than merely 'a touch of arthritis' or 'a bit of wear and tear', allows patients to access the right information so they can begin to find out about living and coping with their condition.

Weight loss if overweight

Most of the published research in OA is about lower limb OA (hip and knee) and the overwhelming majority within that group concerns knee OA cohorts. So the advice about losing weight, for example, is mainly focused on knee OA, although the NICE guideline group concluded that advice to lose weight was sensible for all OA patients.

Every time we take a step, a force of three to six times our body weight goes through our knees, so the link between weight and load through the knee is clear.[3] If you are overweight, reducing your BMI by two units reduces the risk of developing OA of the

knee by 50%. For a female patient of average height, this equates to about 5kg weight loss.[4]

The link between weight loss and improvements in pain in established knee OA is less clear-cut. Weight loss of approximately 5% body weight or at least 6kg leads to noticeable improvement in function, but the direct association with improved pain is not as strong.

However, research shows that a combination of diet and exercise leads to more weight loss, less pain, better function, faster walking speed, further walking distance and better health-related quality of life than diet or exercise alone.[5]

Exercise is one of the most effective weapons in our arsenal for managing the symptoms of OA, with an effect size similar to oral NSAIDs for knee OA, but without the attendant risks.

GP advice

GPs and the primary care team are ideally placed to advise and monitor response to treatment with exercise, but there are challenges.

When patients with OA first start exercising, they often experience more pain and should be warned of this so they persevere.

Qualitative research has highlighted that patients with OA want to be more active, but are worried about pain. I find that starting a conversation about exercise can trigger a constructive dialogue (see box 2).

Box 2: Advising patients about exercise

- Any physical activity is better than none
- Start low and go slow
- The benefits of exercise are dose-dependent – more is more
- It takes about six weeks of regular exercise to experience benefits
- The 'dose' of exercise is at least 30 minutes, three (or more) times a week for aerobic exercise and at least 20 minutes, three times a week, for resistance exercise. This can be broken down into five- or 10-minute sessions
- Adherence is the principle predictor of long-term benefits from exercise, so find something you enjoy doing – and do it
- Promote adherence by using personalised advice, counselling, information, exercise diaries and feedback, such as a pedometer
- To be effective, exercise must be continuing, especially in the older population, who need to train harder to maintain the same effect

The benefits of exercise far outweigh the risks. The main risk is injury, but this can be reduced by advising patients on how they can exercise safely.

The types of exercise that are most beneficial are a mixture of:

- Resistance for strength and joint stability
- Aerobic for endurance, metabolism and mood
- Flexibility for balance, range of motion and co-ordination

Conclusion

All patients with OA should be given advice about the core treatments for the condition. Next time you encounter a patient like Mrs Jones, remember there are many options for her beyond the prescription pad.

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Resources

- Arthritis Research UK (www.arthritisresearchuk.org) has a wide range of information
- National Arthritis Week 12-19 October; for more information, go to www.nationalarthritisweek.org

References

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5. Messler SP, Mihalko SL, Legault C et al. Effects of intensive diet and exercise on knee joint loads, inflammation, and clinical outcomes among overweight and obese adults with knee osteoarthritis: the IDEA randomized clinical trial. JAMA 2013; 310(12): 1263-73.