Ageing Populations: A Rising Challenge in the Treatment of Osteoarthritis

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The Family Medicine Unit of the Department of Community Medicine at The Chinese University of Hong Kong has recently established guidelines for treatment of patients with osteoarthritis (OA) in the primary care setting. This follows a review of current worldwide methods and evidence in the treatment of knee and hip OA. The key messages of the guidelines are as follows:

- Primary care physicians must take a more active role in communicating with patients about available treatment options and their benefits and risks.
- Non-pharmacological interventions should form an integral part of the treatment of OA but optimal treatment requires combination with pharmacological measures.
- Paracetamol is consistently recommended as the cornerstone and first-line treatment for mild to moderate pain in OA, based on its efficacy, safety and cost, and it is the preferred essential component of long-term pain control.
- If paracetamol is inadequate for effective pain control, NSAIDs and coxibs would be considered as adjunctive therapy for the short-term management of flare-ups, strengthening the pain relieving power of paracetamol. The addition of a gastroprotective agent to a conventional NSAID is needed where there is concern over gastrointestinal (GI) risk.

Guidelines for treatment of patients with osteoarthritis (OA) in the primary care setting have recently been developed by the Family Medicine Unit of the Department of Community Medicine at The Chinese University of Hong Kong. In Hong Kong, arthritis is the second most common cause of disability in the elderly (40.6%). A large percentage of these patients suffer from the most common form of musculoskeletal disease; osteoarthritis (OA). OA is estimated to affect 1 in 3 people aged 70 years and older in Hong Kong with over 80% suffering from OA of the knee. Women are nearly four times more likely to suffer from OA than men. With an aging population and the burden of degenerative. For this reason some physicians prefer the term osteoarthrosis. Symptoms of OA are caused by wear and tear, resulting in progressive loss of cartilage followed by reactive change in the joint margin and subchondral sclerosis. X-rays of affected joints show narrowing of the joint space, subchondral sclerosis and inflammation. These pathological changes generally manifest in middle age and usually affect the weight-bearing joints, mainly the knees, feet, hips, lower back and hands.

Prevalence of lower limb OA in Hong Kong and risk factors

The prevalence of OA of the knees and hips in Hong Kong is similar to that reported worldwide. Risk factors for OA include: age >60 years; female gender; excess weight/obesity; the co-existence of other diseases, especially hypertension and diabetes;* and, possibly, genetic predisposition. Why there is a greater incidence of OA in women than in men is not fully understood. Child bearing and rearing, with the additional weight and force this imposes on women's bodies, together with performing routine tasks such as grocery shopping and housework, which involve the repetitive carrying of heavy loads, may be a factor.

Diagnosis of OA

The diagnosis of OA is usually symptom-based. Typically, OA presents as progressive pain of the joint and joint swelling. Stiffness is present, which becomes worse after long periods of inactivity, such as after sleeping, after sitting down or at the end of the day. In some patients, tenderness is reported along the joint line and margin, which may be followed by some crepitus, limitation of movement and possibly effusion. Care should be taken not to misdiagnose the condition. If there is any doubt about the cause of symptoms, further investigations should be carried out, or the patient should be referred to a specialist. Acutely swollen joints are unlikely in OA and patients who display such symptoms should always be referred to a specialist.

Non-pharmacological intervention

Since there is no cure for OA, treatment must be directed towards the prevention and management of symptoms so that patients are able to maintain a normal lifestyle.

Greater emphasis should also be placed on primary prevention such as optimal weight control, regular exercise and avoidance of excess strain on weight-bearing joints, to avoid disease development.

Non-pharmacological intervention is an integral part of the treatment of OA; nevertheless, optimal treatment requires a holistic approach with the combination of both pharmacological and non-pharmacological interventions. Patient education provides useful information on the nature and processes of the disease, and its prognosis, investigation and efficacy of management, and is an important intervention for patients with chronic disease. Practical benefits for doctors also include improved doctor-patient relationships, widened patient pools and maximised efficiency of consultation times. Better patient understanding of OA has been shown to effectively provide additional benefits that are 20-30% as great as the effects of NSAID treatment for pain relief in OA.1

Patients should be encouraged to practise weight control early on in life and to exercise sensibly as there is strong evidence that weight loss plays an important role in the prevention of OA. Studies show that the risk of knee OA in obese people is four to five times that of those of a comparable age who are not obese.1 Furthermore, it was observed that even a modest weight loss will reduce the risk of developing symptomatic knee OA.2 A weight loss of 5 kg in women reduces the risk of knee OA by 50%.3 In both overweight and obese patients with established OA, loss of weight can have a significant effect on the progression of the disease and will reduce the severity of joint pain and disability. As obesity in childhood persisting into adulthood is an increasingly common problem, OA in this population group is likely to occur at an earlier age.

Muscle weakness, loss of motion and pain are common symptoms around the involved joint of OA patients, and so exercise programmes (strengthening exercises and aerobics) and increasing daily level of physical activity can prevent disability and poor health secondary to inactivity. However, each patient should be examined and exercises prescribed in a tailored fashion and individualised for the patient’s needs.

Overuse of joints and inappropriate repetitive movements, such as lifting or carrying heavy loads, should be discouraged. It is estimated that individuals can comfortably bear a load weighing up to 15% of their body weight. In Hong Kong, this acceptable percentage is often exceeded; schoolbags and groceries routinely pose a significant burden on school children and housewives, respectively, and may contribute to the wear and tear that categorises OA.

Management in the primary care setting

The most effective management of OA involves a combination of pharmacological and non-pharmacological approaches. Non-pharmacological treatment is especially important because it allows patients to assume responsibility for themselves and thus feel a part of the management plan. Losing excess weight, appropriate exercise and physiotherapy all help to control symptoms of OA and patients need to be encouraged to pursue a general fitness programme. Patients should understand that medication is aimed at pain control and will not reduce the wear and tear on cartilage; unless they make an effort to adjust their lifestyles and protect their joints, the disease will progress and their symptoms worsen. By taking up an appropriate exercise regimen, patients with OA can be discouraged from becoming reliant on ever-stronger pain control medication. Since the elderly in Hong Kong do not generally maintain a fitness programme, this group of patients would particularly benefit from a better understanding of the importance of adopting a healthy lifestyle.

Although first-, second- and third-line treatments are available for OA, most patients seen by primary care physicians have mild to moderate disease and present in the early stage of the disease process. Appropriate intervention at this stage, when symptoms are not severe, can prevent the onset of complications and enable a simpler line of treatment to be followed.

First-line treatment includes the use of paracetamol, topical agents such as capsaicin, and glucosamine. Administering of paracetamol early on in mild to moderate cases of OA has been reported to be as effective as using NSAIDs and COX-2 inhibitors. When taken as prescribed, unlike NSAIDs and coxibs, paracetamol provides no risk of hepatic toxicity, cardiovascular adverse events, increased GI complications or impaired renal function. Paracetamol’s superior safety profile and suitability for numerous patient groups has thus been recommended as the initial analgesic in OA by a number of national and international organisations.

It is important to be aware of the potential hepatic toxicity of paracetamol, but this is less of a problem than the gastrointestinal and cardiovascular risk factors associated with NSAIDs, which may have serious consequences in the elderly patient with a silent ulcer or undiagnosed cardiovascular disease.

Conclusion

Management of OA has to be individualised, holistic and patient-centred. When treating OA in the primary care setting in Hong Kong and worldwide, it is important to educate patients of the need to maintain an active healthy lifestyle, to keep an ideal body weight, to undergo regular exercise and, when recommended, to attend for physiotherapy. These non-pharmacological approaches, used in conjunction with paracetamol as the cornerstone of pharmacological treatment, form the basis of the clinical guidelines proposed for managing lower-limb OA in the primary care setting.

References