

Background and management of osteoarthritis of the knee

Adrian White

Peninsula Medical School, Universities of Exeter and Plymouth, UK

Osteoarthritis (OA) is a common condition closely associated with ageing, and WHO has estimated that worldwide it affects 10% of the population aged over 60 years. Knee pain affects one in three people over 75 in the UK. Knee pain can cause significant disability and impaired quality of life. Knee OA is progressive in a small proportion of individuals. These will require surgery, but the majority will continue with chronic pain and disability. Osteoarthritis of the knee represents a considerable burden to health services. For example, in Australia, osteoarthritis alone accounts for one fifth of all expenditure on health care.

The pathology of OA is not well understood, though known risk factors include family history, joint injuries, and obesity. The pathology appears to be a complex interaction between joint damage and metabolic changes. The most obvious radiological changes are thinning of articular cartilage, followed by osteophyte formation and sclerosis of subchondral bone. However, radiological changes do not correlate well with the severity of symptoms. Inflammation is now accepted to play a role. The origin of pain is not well understood, and it may arise from subchondral bone and in inflamed synovium.

No definitive treatment exists for chronic knee pain, except surgery for severe cases. Guidelines for management emphasise the need to tailor treatment to the individual, to use step-wise progression, and to combine non-pharmacological and pharmacological approaches. Evidence is sparse on crucial questions such as the benefits of combining treatments, fitting the treatment to the individual patient, and long-term outcomes on pain and function.

Several non-pharmacological therapies may be offered as first and second line treatment. There is some evidence on the long term effectiveness of advice, education, general aerobic training and specific leg strengthening exercises. The use of TENS is effective in the short term.

Of the pharmacological therapies, paracetamol is safe and recommended first. There is some evidence to support the use of topical capsaicin, topical NSAIDs, glucosamine, with or without chondroitin. Non-steroidal drugs are widely prescribed but there is little evidence of their long term effectiveness; they are known to increase the risk of significant gastrointestinal complications including haemorrhage. COX II inhibitors are a good idea, but carry additional risks of ischaemic heart disease. Opioid analgesics may be considered, but again their use is limited by side effects particularly in the elderly population. Many practitioners are hesitant to prescribe drugs for chronic knee pain.

Clearly, none of these therapies is totally satisfactory. There is great scope for a safe and effective treatment, and we look forward to discussing the role of acupuncture as a potentially useful therapy.