Review

Those Aching Joints: Not All Pain Requires a Pill

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Pain

Pain is to be expected in the aging body. Joint pain due to osteoarthritis (OA) will be felt at some time by most of the population over the age of 50 years.[1] There is currently no cure or disease-modifying agent for OA and treatments can only be directed towards symptom management.[2] Although oral pharmacologic treatments using simple analgesics and non-steroidal anti-inflammatory drugs (NSAIDs) have been the cornerstone of management, other options exist and should be incorporated into patient care. More than ever before, physicians must be aware that treatments should cause no harm.

A key point in dealing with pain includes knowing that not all pain requires a pill. Moreover, be aware of the positive benefits that are derived from exercise:

- Stimulation of reparative processes in cartilage
- Maintenance of muscle tone
- Activation of natural descending pain inhibitory mechanisms

Cynthia's case

Cynthia, 59, complains of bilateral knee pain. This pain is particularly troublesome when she walks her dog.

Cynthia played tennis until 10 years ago and has recently given up golf because of her knee pain.

She reports a 5 kg weight gain in the past few years.

She is fearful that she is causing damage by continuing to walk with pain.

Cynthia's review reveals the following:

- The diagnosis is likely osteoarthritis, which can be confirmed by physical examination and x-rays
- Treatment options other than pills may be considered

Questions

1. Should this patient be encouraged to continue exercising?
2. What treatments, other than pills, can be considered?
3. Could an opioid analgesic be a treatment option?

Common sense approach

Common sense measures can often be as effective in treating pain as a handful of pills.[3] Reassurance, with the removal of fear of damage and explanation of the disease process, are important first steps in management. Simply viewing a radiograph helps towards understanding the mechanical reason for pain and enables the setting of reasonable outcome goals. Traditional treatments, which have been used for centuries, such as heat, cold, massage and topical agents, may provide symptomatic relief. Pain management varies per individual patient

and patient need. For one individual, management options may focus on the reduction of anxiety, whereas for another, it may be advice to use soft-soled shoes or a cane.

Benefits of exercise

Exercise provides important benefits and almost never causes harm. A combined program of exercise and weight reduction may very well be the single most important advice to give to patients with lower limb OA.[4] Exercising should become an integral part of normal life and if enjoyable, is likely to be continued. Tai Chi is a controlled and gentle way to begin exercising. Exercise combined with weight reduction greatly improves symptoms of arthritic pain in the knees. Reduction in body weight by only 0.453 kg (1 lb) translates into a 1.814 kg (4 lb) load reduction through the knee joints with every step taken.[5]

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Natural remedies

Patients use natural remedies extensively. Although most complementary products have not been subject to rigorous study, there is increasing evidence for a positive effect with some agents, including:

- evening primrose oil,
- devil's claw (harpargophytum),
- capsaicin,
- avocado/soya, as well as
- dietary omega 3 polyunsaturated fatty acids.[6]

The initial enthusiasm that glucosamine might act as a chondroprotective agent is waning, following a recent negative outcome study.[7]

Topical treatments

Although used for centuries as home remedies, topical applications may eventually play a moderate role in the care of rheumatic problems. Topical treatments may be simple counterirritants, or other agents, such as capsaicin the active ingredient in hot chilies, or NSAIDs. Counterirritants make use of the gate mechanism in pain modulation. Capsaicin depletes substance P from nerve endings after repeated application and NSAIDs affect the inflammatory mediators. Although systemic absorption of these agents does occur, plasma levels of drug are low, whereas local tissue, as well as synovial fluid concentrations, may be high.[8]

Injections

The injection of corticosteroid into an OA joint is a time-honored, useful therapeutic measure that is cheap, with low risks. The general rule of thumb, without an evidence base, is to use no more than three injections per joint per year, with the aim of three months of moderate pain relief. A more expensive option is intra-articular hyaluronic acid. Clinical efficacy is

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moderate, especially within the 15 weeks following an injection.[9] This treatment may be repeated after six months, but cost remains an issue.

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Analgesic treatments

Opioid analgesics are increasingly used in the treatment of musculoskeletal chronic pain.[10] Limitations in the use of opioids includes a lack of long-term efficacy and safety data, as well as the burden of the immediate side-effects. These side-effects are:

- cognitive changes,
- nausea and
- constipation.

Analgesic treatment before a physical activity may help maintain function.

Conclusion

Pain from OA is an expected symptom in the senior years of life. Weight reduction and physical exercise are likely the most important factors in both the prevention and treatment of lower limb OA pain. Non-pharmacologic treatments should be thoroughly explored and may provide impressive benefits. Dx

References

1. Felson DT: Clinical practice. Osteoarthritis of the knee. N Engl J Med 2006; 354(8):841-8.
2. Hogenmiller MS, Lozada CJ: An update on osteoarthritis therapeutics. Curr Opin Rheumatol 2006; 18(3):256-60.
3. Fitzcharles MA, Almahrezi A, Shir Y: Pain: Understanding and challenges for the rheumatologist. Arthritis Rheum 2005; 52(12):3685-92.
4. Focht BC, Rejeski WJ, Ambrosius WT, et al: Exercise, self-efficacy and mobility performance in overweight and obese older adults with knee osteoarthritis. Arthritis Rheum 2005; 53(5):659-65.
5. Messier SP, Gutekunst DJ, Davis C, et al: Weight loss reduces knee-joint loads in overweight and obese older adults with knee osteoarthritis. Arthritis Rheum 2005; 52(7):2026-32.
6. Ernst E: Musculoskeletal conditions and complementary/alternative medicine. Best Pract Res Clin Rheumatol 2004; 18(4):539-56.
7. Clegg DO, Reda DJ, Harris CL, et al: Glucosamine, chondroitin sulfate and the two in combination for painful knee osteoarthritis. N Engl J Med 2006; 354(8):795-808.
8. Mason L, Moore RA, Edwards JE, et al: Topical NSAIDs for chronic musculoskeletal pain: Systematic review and meta-analysis. BMC Musculoskelet Disord 2004; 5:28.
9. Bellamy N, Campbell J, Robinson V, et al: Viscosupplementation for the treatment of osteoarthritis of the knee. Cochrane Database Syst Rev 2006; (2):CD005321.
10. Ballantyne JC, Mao J: Opioid therapy for chronic pain. N Engl J Med 2003; 349(20):1943–53.