Nonsurgical Management of Osteoarthritis Knee Pain in the Older Adult: An Update

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KEYWORDS

• Osteoarthritis • Management • Pharmacologic • Nonpharmacologic

KEY POINTS

- Knee osteoarthritis pain relief in older individuals often involves a mix of nonpharmacologic and pharmacologic therapies to achieve maximum benefit.
- Nonpharmacologic therapy in the form of exercise and weight loss, when appropriate, should be emphasized in all elderly patients with knee osteoarthritis to augment pharmacologic therapy.
- Treatment recommendations for older individuals should account for medical comorbidities, patient preference for modality of treatment, and functional status.

INTRODUCTION

The lifetime risk of symptomatic knee osteoarthritis is 44.7% and disproportionately affects elderly patients.[1] With a growing proportion of the population 65 years of age and older, it is estimated that the United States will have 83.7 million older adults by the year 2050.[2] Older adults opting for knee replacement are likely to suffer longer hospital stays and higher risks of both intensive care unit admission and postoperative complications as compared with younger patients.[3] As a result of patient preference and/or medical comorbidities, health care providers need to be prepared to care for and counsel older patients suffering from knee osteoarthritis who are opting to forego total joint replacement. A review of the most recent evidence regarding nonpharmacologic and pharmacologic management techniques for the older adult with knee osteoarthritis is covered here. Successful programs should be designed to meet the needs of the individual and may require multiple modalities to achieve pain reduction and improved function (**Fig. 1**).

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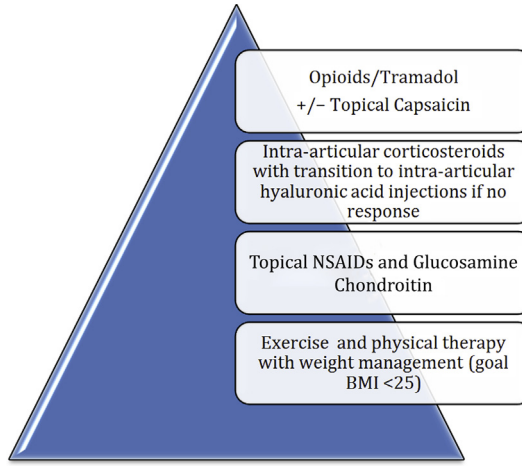

Fig. 1. Recommendations by the author for the treatment of osteoarthritis in the elderly.

NONPHARMACOLOGIC TREATMENT OPTIONS

- Nonpharmacologic management of knee osteoarthritis should focus on exercise and achieving a healthy weight.
- A 7% to 10% weight loss in obese elderly patients with symptomatic knee osteoarthritis should be the initial aim to achieve pain relief.
- Exercise should be tailored to the individual functional level with progressive programs favored.

WEIGHT LOSS

With the rising obesity epidemic in the United States, a large number of elderly patients with knee osteoarthritis will be clinically overweight. It is estimated that one-third of individuals over the age of 60 are obese.[4] Weight loss has been shown to decrease both pain and further cartilage loss. In a study by Gersing and colleagues,[5] a weight loss of greater than 10% over a 48-month time period slowed continued knee cartilage degeneration as measured by T2 images on MRI. Decreased progression of cartilage degeneration was best seen in the medial tibia. Among participants (average age of 62 years) in the study with a greater than 10% weight loss, a statistically significant improvement in pain was measured by the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scales for pain and disability. In a separate study of 192 individuals age 50 or older (average age of 62.5 years) and an average body mass index (BMI) of 37 kg/m^2, a structured weight loss program over 16 weeks determined that 64% of patients had significant pain reduction as measured by the Outcome Measures in Rheumatology (OMERACT)–Osteoarthritis Research Society International (OARSI) Responder Criterion.[6] Clinical improvement related to weight loss was not affected by baseline structural damage, quadriceps strength, or abnormalities in the mechanical axis.

Although weight loss is a frequent recommendation in guidelines for treatment of osteoarthritis, the optimal amount of weight loss to target remains undetermined.[7,8] In an attempt to answer the question, an Australian study involving 1383 individuals with an average age of 64 years and a mean BMI of 34.4 found that a 7.7% weight loss was required to achieve significant pain reduction based on the Knee Injury