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Current recommendations from the American Academy of Orthopaedic Surgeons regarding treatment of patients with osteoarthritis of the knee.

Clinical practice guidelines have been developed by the American Academy of Orthopaedic Surgeons (J. American Academy of Orthopaedic Surgeons 2009; 17: 591-600). The following is a summary of current standards of practice for treatment for arthritis of the knee and are developed to include treatments to be considered before knee replacement surgery (arthroplasty) is considered.

Recommendations are graded based on the total body of evidence available using the following system:

A.
1. Good evidence (consistent level I studies).
2. Fair evidence (consistent level II and III studies).
3. Poor-quality evidence (level IV or V).

B.

Individuals with osteoarthritis of the knee often report joint pain, stiffness, and functional deficits. The goals of treatment are pain relief and improvement of maintenance of functional status.

Recommendation 1

We suggest that patients with symptomatic osteoarthritis of the knee be encouraged to participate in self-management educational programs, such as conducted by the Arthritis Foundation, and incorporate activity modifications (e.g., walking instead of running, alternative activities) into their lifestyle.

Recommendation 2

We recommend that patients with symptomatic osteoarthritis of the knee who are overweight (BMI > 25) should be encouraged to lose weight (a minimum of 5% body weight) and maintain their weight at a lower level with an appropriate program of dietary modification and exercise.

Supporting this recommendation is that weight loss results in possibly clinically important and statistically significant effect for functional improvement measured by the Western Ontario and McMaster Universities (WOMAC) function subscale.

Recommendation 3

We recommend that patients with symptomatic osteoarthritis of the knee be encouraged to participate in low-impact aerobic fitness exercises.

The effect size of aerobic exercises of pain relief and disability are statistically significant. Although the clinical importance of these effects cannot be determined, the relative low cost and likely additional health benefits support this recommendation.

Recommendation 4

We suggest quadriceps strengthening for patients with symptomatic osteoarthritis of the knee. A simple exercise such as straight leg raises with the leg straight and held for 150 seconds can be instituted easily at home done twice a day on each leg takes only minutes to perform.

Recommendation 5

Utilization of an unloading brace has a level of evidence II with an inconclusive grade of recommendation. One of the randomized control trials include:

In the systematic review presented insufficient quantitative data for analysis. The quantitative results reported by the systematic review indicate that patients in the brace group improved more on each outcome than did patients who received either Neoprene sleeve or were in the control group.

Recommendation 6

One of the six systematic reviews concluded no clinical benefit for glucosamine or chondroitin compared with placebo. The remaining five systematic reviews did not provide conclusions on the clinical importance; however, they did conclude glucosamine and/or chondroitin are superior to placebo.

Recommendation 7

We suggest that patients with symptomatic osteoarthritis of the knee receive one of the following analgesics for pain unless there are contra-indications to this treatment: acetaminophen ($\leq$ 4 g/day) or nonsteroidal anti-inflammatory drugs (NSAIDs).

Recommendation 8

We suggest that patients with symptomatic osteoarthritis of the knee and increased GI risk (i.e. age $\geq$ 60 years, comorbid medical conditions, history of peptic ulcer disease, history of GI bleeding, concurrent use of corticosteroids and/or concomitant use of anticoagulants) receive one of the following analgesics for pain: acetaminophen (not to exceed 4 g per day), topical NSAIDs, nonselective oral NSAIDs plus gastroprotective agent; or cyclooxygenase-2 (COX-2) inhibitors.

Recommendation 9

We suggest that intra-articular corticosteroids be used for short-term pain relief for patients with symptomatic osteoarthritis of the knee. Intra-articular corticosteroids are effective for relieving pain in the short term (at 1 week and 16-24 weeks, at 1 week and continuing at 2 to 3 weeks, and within 1 to 2 weeks).

Recommendation 10

Intra-articular hyaluronic acid rated a level of evidence I and II with an inconclusive grade of recommendation. The AHRQ report states that “viscosupplementation generally shows positive effects”. The AAOS work group agreed that the AHRQ report presents a high quality symptomatic review of level I and II evidence and graded this recommendation as inconclusive because of the conflicting evidence in pooled effects along with unclear clinical importance of the results.

Recommendation 11

We recommend against performing arthroscopy with debridement or lavage in patients with a primary diagnosis of osteoarthritis of the knee.

Recommendation 12

Arthroscopic partial meniscectomy or loose body removal is an option in patients with symptomatic osteoarthritis of the knee who also have primary signs and symptoms of a torn meniscus and/or loose body.