
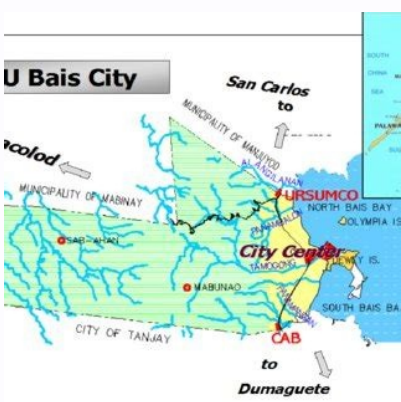


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Case Study

AAOS Clinical Practice Guideline: Surgical Management of Osteoarthritis of the Knee: Evidence-based Guideline

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Osteoarthritis (OA) is the most common cause of disability in adults in the United States.^{1,4} Symptomatic OA of the knee develops in nearly one in two people by age 85 years. Currently, total knee arthroplasty (TKA) is the most common reason for inpatient hospitalization, 3 million women and 1.7 million men have undergone knee arthroplasty in the United States.⁵ In 2011, 757,000 knee arthroplasties were performed for arthritis. Genetic predisposition, trauma, overuse, obesity, and certain occupations increase the risk for the development of OA of the knee.⁶

The symptoms associated with OA of the knee include joint pain, stiffness, and decreased mobility. The goal of treatment is to provide symptomatic relief initially through nonoperative and nonsurgical means, including NSAIDs, weight loss, and an exercise/physical therapy program.⁷ When symptoms persist and worsen despite the use of nonoperative methods, TKA is an effective intervention to relieve pain and improve function and mobility.^{5,8} However, there are risks and benefits with any surgical intervention and these will vary depending on patient factors and comorbidities. During the preoperative, perioperative, and postoperative aspects of surgical management of OA of the knee, there are multiple decision points and options. These options, based on the best evidence, are highlighted in the American Academy of Orthopaedic Surgeons *Surgical Management of*

*Osteoarthritis of the Knee: Evidence-Based Guidelines*⁹

History

The patient is a 67-year-old woman who reports gradually worsening left knee pain over a 3-year period. She was walking 10 miles per week until 6 months ago when she had to decrease her activity because of moderate to severe pain with weight bearing. She has a history of type 2 diabetes mellitus and has a body mass index of 33. She has no other significant past or current medical diagnoses, and she reports no history of trauma to the knee.

Physical Examination

Examination reveals a mild left knee effusion and increased tenderness over the medial joint line compared with the lateral joint line. Passive arc of motion of the left knee is 10° to 100° compared with 0° to 125° on the right side. The patient walks with a minimally antalgic gait on the left side without the use of an assistive device.

Imaging

Standing AP, lateral, and Merchant radiographic views reveal moderate to severe tricompartmental degenerative changes with loss of joint space greatest in the medial and patellofemoral compartments and osteophyte formation (Figure 1).

Initial Management

The patient started taking NSAIDs twice daily, with moderate relief

