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Pain in the Knee – Unnecessary Knee Arthroscopy

Story from the front lines
A woman in her 60s presented to clinic to discuss pain in her right knee. This had been going on for many months, progressively worsening to the point of constant discomfort. NSAIDs and Tylenol were relatively ineffective, though she hadn’t tried anything else to ameliorate her symptoms. She reported mild difficulty walking up and down stairs, as well as grinding, popping, and periodic swelling of the joint. A physical exam revealed crepitus, swelling, and pain with McMurray’s testing. She was understandably frustrated, and requested imaging and a referral to orthopedics to discuss surgical options.

Teachable moment
Osteoarthritis (OA) is a common problem, with knee OA affecting over 10% of individuals over age 60. It is the result of mechanical, metabolic and inflammatory stress on joints, which leads to destruction of articular cartilage. It affects a broad range of patients, and risk factors are varied, from BMI to age to gender and activity level. OA can usually be diagnosed by physical exam, although clinicians also rely on imaging to assess disease severity.

There’s no way to reverse the damage caused by OA and it is difficult to halt its progression. Nonetheless, symptoms can often be effectively managed in the primary care setting. Typically, treatment begins with medications like acetaminophen, NSAIDs or intra-articular steroids, in conjunction with risk factor modifications that include weight loss and exercise or physical therapy.

Surgery is available for those patients with severe disease who suffer from intractable pain despite optimal medical management and therapy, with some patients gaining substantial benefit from procedures such as total knee arthroplasty when indicated. Some patients however may proceed to surgery even before they have exhausted more conservative options.

While total knee arthroplasty is generally performed on patients with severe OA, even those patients with mild to moderate OA can opt for a minimally invasive procedure, in which damaged articular cartilage is debrided or (either partially or completely) removed.

Unfortunately, despite more than 4 million knee arthroscopies performed annually, there is little evidence that the procedure is superior to noninvasive strategies.

In the last several years, placebo-controlled, double-blinded studies have demonstrated that patients who fail maximum medical therapy and subsequently undergo knee arthroscopy derived no statistically significant benefit when compared to similar patients receiving sham surgery.

What’s more, multiple studies have shown that intensive outpatient physical therapy leads to functional improvement that is comparable to that achieved with arthroscopic surgery, even several years out.

Arthroscopy is far more expensive than therapy and medication. Although it is minimally invasive, it still carries the risk of complications like bleeding and infection, as well as days to weeks of recovery time. Moreover, studies show that in the long run, the procedure may actually accelerate the disease that it is meant to treat.
All of this raises the additional issue of imaging. Arthroscopy targets areas of the knee joint that are radiographically abnormal and thought to be sources of pain. Unfortunately, x-ray findings like osteophytes, joint space narrowing and cartilage deformities don’t correlate well with symptoms, and may be present in asymptomatic individuals.\(^1\) MRI, which is more specific for pain in OA,\(^1\) is a costly modality that can often be replaced with a thorough physical exam, and may be moot if the patient isn’t going to surgery anyway.

Our patient was diagnosed with OA that day. She received a steroid injection in the office and was eventually referred to weekly physical therapy. She deserves a fair trial of conservative treatments, and only when she has truly failed these strategies should she be referred for surgery, at which point she’ll likely benefit most from a knee replacement, bypassing arthroscopy entirely.

References:


