Management of Knee OA

Osteoarthritis is a progressive disease with a treatment for each stage.

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In general, the people who come to see me for a knee replacement all end up telling a version of the same story…. You know, a couple of years back, I started getting some pain in my knee. I didn't think much of it, took some OTC Tylenol, and the pain came and went. After awhile, it started to become more frequent and eventually bothered me enough that I went to see my family doctor. She gave me a prescription that worked pretty good for awhile, but when that stopped working she gave me a cortisone shot that worked for a little while. But now, that's not working. The stronger medications I've been given aren't effective and my pain is becoming progressively more severe, it wakes me up at night. I'm becoming more housebound, more sedentary, the quality of my life is becoming unacceptable. Doctor, take the pain away.

As you can see, arthritis starts out slowly and accelerates over time. Likewise, there is a treatment progression that modulates and adds techniques until a point is reached when all the conservative measures no longer relieve the symptoms of the condition and the patient is willing to proceed with an operation to end his or her pain and gain mobility.

The progression of the disease and the treatment of knee osteoarthritis is typically as follows:

Symptoms intensify…People with arthritis complain of pain, swelling, stiffness, start-up pain after awakening in the morning, and rest pain after long periods of inactivity. As the symptoms increase in intensity, people with OA find themselves becoming more homebound, more sedentary, and avoiding activities of daily living they would have otherwise enjoyed.

At some point, they're ready to see a doctor.

Diagnosis: Arthritis… I take a history and inquire as to the symptoms and what the patient has done about them, if anything. The knee is examined—for tenderness, swelling, range of motion and stability—and the patient's gait assessed (are they walking with a limp, for example).

X-rays are taken, with attention to a weight-bearing view, to evaluate for deformity or loss of joint space. Blood tests, CAT scans or MRIs may be done for some patients.

Conservative, non-invasive, non-surgical treatments constitute the initial approach. These can result in a significant reduction of pain and stiffness and facilitate, at least for a period of time, a return to excellent function.

Lifestyle modifications are among the first treatments considered. If a patient is obese, for example, we need to help them lose weight. Perhaps a change in the type of sport the person engages in would be beneficial: If they're doing cross country running on hard terrain, a high-impact sport, they may need to switch to a low-impact sport, such as bicycling or swimming.

Exercise—strengthening, range of motion, and low-impact aerobic exercises—as well as physical therapy can provide clinically significant improvement.

Supportive devices, such as braces, can often be effective. However, even when they provide relief, I find that patients often abandon them because they're cumbersome and uncomfortable.

Medication. OTC medications have often been tried by patients before they come to us. We can supplement these with prescription strength NSAIDs, such as Celebrex, as well as with opiate-based painkillers.

Topical treatments, such as Voltaren gel—an anti-inflammatory similar to ibuprofen—are useful for pain control in patients at risk of GI upset or drug-on-drug interactions. I've seen **OTC supplements**, such as glucosamine and chondroitin sulfate, provide effective relief in some patients in the earlier stages of arthritis. Likewise, omega-3 supplements, such as fish oil and flax-seed oil, which tend to have a natural anti-inflammatory property, may ease arthritic pain and stiffness.

Depending on the stage at which patients present themselves to us—early in the disease progression or when they can't take another step— these treatments are effective for a period ranging from months to years.

Slighty invasive treatment: Injectables.

Corticosteroids are the most common type of knee injection, oftentimes very helpful in reducing pain and swelling, even in severe cases of arthritis. We try to restrict their use to no more than 4 injections in a year. There is wide variability in patient response: some patients get years of relief out of a single injection.

Viscosupplementation is a less common treatment in which hyaluronic acid, a thick lubricating fluid, is injected into the knee joint. The onset of relief is not as quick as with a corticosteroid, though in patients for whom it is effective, prolonged relief may occur.

Platelet-rich plasma therapy (PRP) involves drawing blood from the patient and concentrating the natural healing elements in platelets in a centrifuge. The platelet-rich plasma is then injected into the knee joint. PRP doesn't grow new cartilage, but studies show that it may slow the progression of knee OA as well as relieve pain.

When the range of conservative treatments and injections no longer provide the patient with adequate pain relief and functionality, the next step on the continuum of care is total joint replacement.