



Advancing Concepts in Osteoarthritis Management

The New Cutting Edge

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As the baby-boomer generation ages, osteoarthritis has reached almost epidemic proportions. More than 21 million Americans suffer from some form of osteoarthritis. This number will likely increase dramatically as the baby-boomer generation pushes past 50 ...



Almost everyone who lives long enough will suffer from some form of osteoarthritis. This may be in the form of what is most commonly thought of as hip or knee problems; however, osteoarthritis frequently affects the joints of the hands, spine, shoulders, and, in fact, almost any joint.

Symptoms include joint pain or aching, often after excessive use but sometimes after limited use. There may also be joint stiffness, loss of motion, and loss of strength. Osteoarthritis results from the loss of articular cartilage, or the slippery substance on the end of the bones, resulting in bone-against-bone friction.

There have been multiple advances in the treatment of osteoarthritis. Initial management for all patients should include a lengthy course of nonoperative treatment. This means patients should increase their fitness level, maintain an ideal body weight, increase their overall health, and maximize joint range of motion, strength and coordination, and optimal management of all medical conditions.

There are multiple medicines used to treat osteoarthritis pain. The most frequently reached for are the nonsteroidal anti-inflammatory drugs such as Ibuprofen and Aleve, which are over-the-counter, as well as approximately 20 prescription nonsteroidal anti-inflammatory drugs. Tylenol is also an effective medication for the management of pain caused by traumatic arthritis.

Pain Medicines

In more advanced cases, osteoarthritis can be managed by chronic narcotic or pain medicines, such as codeine and hydrocodone. Supplements such as glucosamine and chondroitin are also receiving a lot of thought with regard to the nonoperative management of osteoarthritis. These compounds are felt to be nutrition for the articular cartilage and may indeed alleviate discomfort from this condition.

Recent studies show that glucosamine and chondroitin may be as effective as nonsteroidal anti-inflammatory drugs and acetaminophen, or Tylenol, with regard to managing this pain.

Intra-articular injections of cortisone or hyaluronic acid derivatives such as

Synvisc, Hyalgan, and Supartz also may play a role in nonoperative treatment.

Functional bracing to realign the extremities and unload some of the forces on the arthritic joint may also help. Orthotics or changes in shoe wear may also change mechanical axis to unload arthritic joints.

Operations

Operative treatment can take several forms with regard to management of wear-and-tear conditions. Arthroscopy, or “cleanup” type operations, with a small TV camera, small shavers, and other tools, has been shown to be effective if a definable degenerative change such as meniscal tear or other specific pathology can be identified.

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Realignment-type operations such as cutting the bone are still utilized but less frequently than in the past. Fusion-type operations are also intermittently used for joints such as the ankle, fingers, and spine.

Replacement-type operations are probably the most frequently performed for severe osteoarthritis. These are large operations in which a portion or the entire joint is removed and replaced with mechanical components. Approximately 350,000 joint replacement surgeries are carried out in the United States per year, and this number is increasing. A complete replacement such as a total knee replacement is a well-accepted treatment for severe arthritis, or for patients who are not responsive to conservative or nonoperative treatment. Complete replacements can also be carried out in almost all joints from the fingers, wrists, elbows, shoulders, hips, and ankles; now even disc space replacements can be carried out.

Advances in Surgery

Recent advances in joint replacement surgery include minimal incision hip surgery and minimally invasive knee surgery for unicondylar or one-sided replacement. These new techniques of older operations allow for faster recovery, lower operative morbidity, less blood loss, and a lower infection rate. Most patients who

experience minimally invasive techniques return more quickly to work and to activities of daily living. Their hospital stays are typically shorter, and most patients feel their joints act more like a normal joint than with conventional operative techniques.

The disadvantages of minimally invasive techniques are that they have fewer indications, meaning not all patients qualify for them. The joints to be replaced must have arthritis that is conducive to minimally invasive techniques. Obese or extremely large patients may not qualify for a minimally invasive technique. These are newer techniques that may indeed have a higher reoperation rate, as they are yet unproven at long-term survival, meaning 15 years.

Unicondylar, or minimally invasive, knee surgery is gaining in popularity. In this procedure one joint of the three joints within the knee (i.e. medial, lateral, and patellofemoral joints), is replaced. This typically is the medial joint. In this procedure, only the arthritic half of the knee is replaced. This procedure is still a significant operative procedure with significant risks and only should be carried out in patients who have failed a lengthy nonoperative treatment regimen. The patient selection is critical in the success rate of unicondylar knee replacements. Hospital stay after this procedure is typically one day with rehabilitation also being significantly shorter than with a complete knee replacement. Not all patients qualify for unicondylar knee surgery, however. This can only be determined with extensive counseling and examination by an orthopedic surgeon who is familiar with the techniques of unicondylar knee replacement.

There have been many advances in the treatment of arthritis. It is an exciting time in research and development for this condition. There will be many advances in the relatively near future with both nonoperative and operative techniques for the treatment of osteoarthritis. ❖

