

New methods for the diagnosis of osteoarthritis

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OSTEOARTHRITIS

Osteoarthritis is a prevalent degenerative articular cartilage disease accompanied by hypertrophic bone alterations. Genetics, feminine sex, prior trauma, growing age, and obesity are all risk factors. The diagnosis is based on a history of joint discomfort exacerbated by movement, which can lead to impairment in everyday tasks. Plain radiography may aid in diagnosis, but laboratory testing is typically ineffective. Treatment should begin with acetaminophen and progress to nonsteroidal anti-inflammatory medications. Exercise is an effective therapy adjunct that has been demonstrated to decrease pain and impairment. When taken together, the supplements glucosamine and chondroitin can be used to treat moderate to severe knee osteoarthritis. Corticosteroid injections are affordable and give short-term (four to eight weeks) alleviation of osteoarthritic knee flare-ups, but hyaluronic acid injections are more expensive but can sustain symptom reduction for longer lengths of time. Total joint replacement of the hip, knee, or shoulder is indicated for patients who have chronic pain and impairment after receiving the most effective medical treatment.

Osteoarthritis is a prevalent degenerative disease of the articular cartilage that is accompanied by hypertrophic alterations in bone. Genetics, feminine sex, prior trauma, growing age, and obesity are all risk factors. Family physicians should anticipate meeting more patients with osteoarthritis as the U.S. population ages and becomes more obese.

DIAGNOSIS

Joint pain is the most frequent symptom of osteoarthritis. The discomfort worsens with activity, especially after a period of rest; this is known as the gelling phenomenon. Morning stiffness can be caused by osteoarthritis, although it generally lasts less than 30 minutes, as opposed to rheumatoid arthritis, which produces stiffness for 45 minutes or longer. Patients may complain of joint locking or instabilities. These symptoms lead to a loss of function, with patients restricting their regular activities due to pain and stiffness.

The wrists, knees, hips, and spine are the most often afflicted joints, although virtually any joint can be implicated. Asymmetric osteoarthritis is common. A

patient may have severe, debilitating osteoarthritis in one knee while the opposing limb functions relatively normally.

A physical examination is essential in making a diagnosis. All kinds of osteoarthritis have pain and loss of range of motion, but each joint has its own physical examination results.

Because osteoarthritis is largely a clinical diagnosis, clinicians may establish the diagnosis with confidence based on the history and physical examination. Plain radiography can assist confirm the diagnosis and rule out alternative possibilities. Advanced imaging methods, such as computed tomography or magnetic resonance imaging, are rarely required unless the diagnosis is in dispute and another cause, such as a meniscal injury, is suspected.

Typically, laboratory testing is not necessary to make a diagnosis. Inflammatory markers such as erythrocyte sedimentation rate and C-reactive protein level are usually normal. Immunologic tests, such as antinuclear antibodies and rheumatoid factor, should not be conducted unless there is evidence of joint inflammation or synovitis, which increases the likelihood of autoimmune arthritis. A uric acid level is only advised if gout is suspected. Because false-positive findings are conceivable, ordering any of these tests may create unneeded confusion if the pre-test likelihood of gout or autoimmune arthritis is minimal. In primary care populations, rheumatic panels (e.g., erythrocyte sedimentation rate, rheumatoid factor, antinuclear antibodies, uric acid, and, in certain regions, Lyme serology) have an unusually high prevalence of false-positive findings. A clinical recommendation from the American College of Rheumatology advises against routinely obtaining arthritis panels for individuals with joint issues.

TREATMENT

Treatment options are classified into four types: nonpharmacologic, complementary, pharmacologic and surgical. In general, treatment should begin with the least intrusive and safest therapies before progressing to more invasive and costly procedures. All individuals with osteoarthritis should get at least part of the first two types of therapy. Surgical intervention should be reserved for patients who have intractable pain and loss of function and have not improved with behavioural and pharmacologic therapy.

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Received: March 28, 2021, Accepted: May 12, 2021, Published: May 19, 2021



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