



Arthritis News

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FREQUENT KNEE PAIN POINTS TO INCREASED INCIDENCE OF SYMPTOMATIC OSTEOARTHRITIS

SAN ANTONIO, TEXAS—Even when X-rays are normal, knee pain can be due to osteoarthritis, according to research presented this week at the American College of Rheumatology Annual Scientific Meeting in San Antonio, Texas.

Between 25 and 30 percent of adults in any community will suffer frequent knee pain, but only half of those cases typically can be confirmed as osteoarthritis (also called degenerative arthritis) through X-ray. Of these cases, some individuals may be experiencing pain from sources outside the joint, not actually related to knee osteoarthritis. As a result, the true prevalence of symptomatic knee osteoarthritis (knee osteoarthritis with pain) as well as knee pain not associated with osteoarthritis is unknown.

To study the cause of knee pain, a cross-sectional study of 1,319 patients, average age 65.8 years was performed. Thirty percent of the subjects who experienced frequent knee pain underwent physical examinations as well as X-rays and MRIs of both knees. Those without a joint-driven source of knee pain were then examined for symptomatic radiographic osteoarthritis, that is, osteoarthritis that can be seen on an X-ray to cause joint pain or associated symptoms. If no radiographic evidence was demonstrated, patients were then examined for associated MRI features that could produce pain, such as problems in the bone marrow, bones or swelling. Like previous studies, the knee pain that 30 percent of these elderly patients experienced on most days proved to be associated with non-joint problems. Only 8 percent showed X-ray evidence of symptomatic osteoarthritis (as compared to about 12 percent from previous estimates) and 8 percent had pain resulting from a source around the joint, such as bursitis. Of the 86 patients who had MRI performed of their knees, 84 had abnormal MRI features consistent with osteoarthritis that could produce knee pain.

“The use of more sensitive investigations such as MRI demonstrated that symptomatic osteoarthritis of the knee is much more prevalent in our communities than we previously thought,” said D. J. Hunter, MD, Boston University Medical Center, and lead investigator in the study. “This is a signal to physicians that we need to reconsider how we diagnose and define osteoarthritis.”

The American College of Rheumatology is the professional organization for rheumatologists and health professionals who share a dedication to healing, preventing disability and curing arthritis and related rheumatic and musculoskeletal diseases. For more information on the ACR’s annual meeting, see www.rheumatology.org/annual.

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Editor’s Notes: Dr. Hunter will present this research during a scientific session at the ACR Annual Scientific Meeting from 10:45–11:00 AM CT (11:45 AM–NOON ET) on Thursday, October 21, in Room 214 C–D of the Henry B. González Convention Center. He will be available for media questions during a briefing at 8:30 AM CT (9:30 AM ET) on Monday, October 18, in the on-site Press Conference Room, Room 218.

The Etiology of Knee Pain in the Community

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Frequent knee pain occurs in 25–30% of adults in most community based studies, but only ½ is accompanied by x-ray OA. Those with x-ray OA are characterized as having symptomatic OA even though their pain may arise from extra-articular structures. Also, since x-rays are insensitive to OA pathology, many more persons with knee symptoms may have symptomatic OA than suggested by x-rays. The true prevalence of symptomatic knee OA in the community is therefore unknown, as is the prevalence of non-articular knee pain. The purpose of this investigation was to examine the etiology of knee pain in the community.

We performed a cross-sectional study using the Framingham OA Study Cohort, a population based study of subjects > 45 years old. Subjects completed a questionnaire, and all those with knee pain on most days of the last month had bilateral knee x-rays, MRI and a physical examination. MRI features were scored for osteoarthritis features that are potential sources of pain including bone marrow lesions, osteophytes, bone attrition, and effusions using the WOMBS scoring method. Physical examination of the knees ascertained tenderness at the anserine bursa and the iliotibial band (ITB). When a subject reported tenderness at a site, they were asked if this was the pain that they felt in their knee. We examined the prevalence of knee pain, and firstly eliminated those who based on physical exam, had a non-articular source of knee pain (anserine bursa, ITB tenderness as ‘the pain they felt in their knee’). In the remaining subjects we next examined for the presence of radiographic OA (K&L≥2), labeling these as symptomatic radiographic OA. Then for those without knee OA we explored whether they had MRI features associated with OA that may produce pain, suggesting these people also had symptomatic OA despite negative x-rays.

1319 subjects were studied with a mean age of 65.8yrs of whom 57% were women. 30% of subjects (n=393) had knee pain on most days. Of these subjects 95 and 13 attributed their knee pain to the anserine bursa and ITB respectively. Of the remaining subjects 112 (8% of whole sample of 1319 subjects) had radiographic knee OA and were labeled as symptomatic radiographic OA. Of the remaining 173 subjects, 86 had an MRI performed of their knees. 84 of these subjects had an abnormal MRI feature that may produce knee pain. The most common features found in these 84 subjects were; osteophytes, effusions, bone marrow lesions, and bone attrition found in 76, 75, 57, and 22 subjects respectively.

Consistent with previous studies 30% of elderly person experience knee pain on most days, and a substantial portion of this is attributable to extra-articular sources of pain from physical examination. In contrast with previous studies (previous estimates of ~12%) only 8% of this sample had symptomatic radiographic OA, and 8% had a peri-articular source for their pain. Many of the remainder had MRI features consistent with osteoarthritis. Such that symptomatic OA is therefore much more prevalent than community studies have heretofore indicated.

Disclosure: D.J. Hunter, None; V. Patil, None; J.B. Niu, None; C. McLennan, None; M. LaValley, None; H. Genant, None; D. Felson, None.