Hypermobility Raises the Risk for Osteoporosis

Patients may have comorbidities, suggesting that management would ideally be multidisciplinary.

BY DENISE NAPOLI
Assistant Editor

Patients with hypermobility have a significant and often unappreciated risk for osteoporosis.

The prevalence of osteopenia and osteoporosis is very high in this cohort, said Dr. Eric P. Gall, chief of rheumatology and allergy at the Chicago Medical School, North Chicago.

"In my patient population, this is something that I'm well aware of and I tend to screen for osteoporosis sooner rather than later, particularly if there are any other risk factors." said Dr. Gall during an audioconference on the subject organized by the American College of Rheumatology.

Additional complications of hypermobility include problems with proprioception, osteoarthritis, mitral valve prolapse, hernias, passing out, palpitations, chest pain, fatigue, and heat intolerance.

"These patients don't just complain of pain in their joints; they complain of lots of things," he said. "They maybe have headaches and chronic pain. Sometimes pain disrupts their sleep and they get secondary fibromyalgia. [They could have] problems with sexual relations. They may have injuries and [psychological] reactions to the injuries. They have resistance to local anesthetics."

One of the reasons why hypermobility can be difficult to diagnose is that patients may not always have pain in the affected joints. "If a patient has pain, they protect their joint and develop arthritis in the joint," he said, reducing range of motion and disguising the hypermobility. (For complete diagnostic criteria of hypermobility, see sidebar.)

One specific type of hypermobile disease is Ehlers-Danlos syndrome, which has 10 subtypes, all characterized by slightly different associated comorbidities and risk factors. One of the most serious of these (type 4) may be fatal, but is also especially rare, with an estimated prevalence of 1 in 250,000, said Dr. Gall. Hallmark signs are vascular aneurysms; bowel and organ rupture; milder hyperextensibility compared with other types; translucent skin; pinched nose; dystrophic scars; and severe ecchymosis, which can often lead doctors to think that the sufferer is being physically abused.

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These images demonstrate hyperextensivity in two patients with Ehlers-Danlos syndrome, a specific type of hypermobile disease.

"So how do we manage these people?" asked Dr. Gall. He mentioned that screening for mitral valve prolapse—both by listening and, if indicated, echocardiogram—is very important. "We discourage the hypermobile activities of daily living, although in the musician and the dancer we have to put practicality together …and make compromises." Additionally, physical therapy can help these patients, as can measures to protect fragile skin. Recurrent dislocations can be treated with surgery, but sutures must be very carefully and closely placed, with "careful hemostasis." "All [of the patients] who have severe disease are in need of genetic counseling" as well, he added.

Another serious hypermobility disease is Marfan syndrome. The criteria for a Marfan diagnosis is complicated, but Dr. Gall said that from a practical standpoint, if a patient's arm span measures more than 1.1 times his height, that is a good sign that Marfan syndrome may be present.

These patients can suffer complications like scoliosis, pectus excavatum, and pectus carinatum, also known as a "pigeon chest." "That can be so severe that it actually can compress the heart," said Dr. Gall. These patients also often have a high, arched palate. "You wouldn't see it unless you looked for it," he said.

In Marfan syndrome, Ehlers-Danlos syndrome, and all hypermobility disorders, Dr. Gall emphasized that "management is multidisciplinary. People really have to work together as a team: The patient, the rheumatologist, the orthopedist, and the primary care providers all need to work together with the physical and occupational care therapist in dealing with these diseases.

"I have seen more and more [hypermobility] in patients that I see for other things …but you have to look for them; you have to be aware of them," he said.

Patients with hypermobility often amaze others with their special skill, enabled by their joint laxity, in piano playing, ballet, and athletics. However this gift may become "a danger if we don't manage it appropriately," he warned.

Dr. Gall said he had no conflicts of interest to disclose in relation to his presentation. The conference was sponsored in part by the following pharmaceutical companies: Genentech Inc., Biogen Idec Inc., UCB Inc., Abbott Laboratories, Amgen Inc., Wyeth Pharmaceuticals, and Hoffman-LaRoche Inc. ■

Diagnosis Requires Several Criteria

A diagnosis can be made if a patient has both of the major criteria, or if the patient fulfills one major criteria and two minor criteria, or simply has four minor criteria. The Beighton hypermobility score assigns up to 9 points based on a patient's ability to bend and flex certain parts of the body.

Major criteria:
- ► A Beighton score of greater than 4 (out of 9).
- ► Arthralgias for greater than 3 months in more than four joints.

Minor criteria:
- ► A Beighton score of 1-3.
- ► Arthralgia in 1-3 joints.
- ► History of joint dislocation.
- ► More than three soft tissue lesions.
- ► Marfanoid habitus (tall and slim, with a span:height ratio greater than 1.03, and an upper:lower segment ratio less than 0.89).
- ► Skin striae, hyperextensibility, or scarring.
- ► Lid laxity.
- ► History of varicosity, hernia, visceral prolapse.

Source: J. Bone Joint Surg. Br. 1969;51:444-53.

Expeditious ACL Reconstruction Is Best for Meniscus Repair

BY SHERRY BOSCHERT
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SAN FRANCISCO — Meniscus injury in patients undergoing anterior cruciate ligament reconstruction was three times more likely to be repairable when the repair was done within 12 weeks of the injury, based on the results of a retrospective study.

The findings corroborate those of several previous studies that linked increased meniscus pathology with longer wait times from injury to ACL reconstruction, Jason Akindolire said at the annual meeting of the American Academy of Orthopaedic Surgeons.

Mr. Akindolire and his associates reviewed the records of 317 consecutive patients, aged 40 years or younger, who underwent ACL reconstructions in 2003-2005 at two clinics—one operating in the Canadian national system of guaranteed health care, where wait times can be longer than those in the United States, and the other a private clinic in Mississippi, where many of the fees for service are paid by third-party payers.

Patient demographics were similar, with a mean age of 23 years in Canada and 22 years in Mississippi. Practice patterns at the clinics were similar. The study excluded patients who had multiligament injuries or a history of ipsilateral surgery.

Mean wait times from injury to ACL reconstruction were 76 weeks (median 40 weeks) in the Canadian clinic and 23 weeks (median 4.4 weeks) in the U.S. clinic, reported Mr. Akindolire, a graduate student in sports medicine at the University of Western Ontario, London.

Among patients with meniscus pathology, those at the U.S. clinic were 78% more likely to have a repairable tear, compared with patients at the Canadian clinic.

Patients with meniscus pathology who waited a shorter time for ACL reconstruction were 78% more likely to have a repairable tear, compared with those who waited longer.

Meniscus tears were less amenable to repair as the time to ACL reconstruction increased, he said. The odds of meniscal pathology being repairable were 2.6 for patients who underwent ACL reconstruction less than 12 weeks after injury, compared with those who had later surgery, and were 1.7 for patients who underwent ACL reconstruction less than 26 weeks after injury, compared with those who had surgery later.

As the time between injury and ACL reconstruction increased, the complexity of meniscus tears also increased, Mr. Akindolire added. Over time, more bucket-handle tears and complex degenerative tears were seen in his review of intraoperative diagrams and notes.

"There is merit to providing expeditious ACL reconstruction—within 12 weeks, perhaps," he said. "By doing that, we may be able to preserve the menisci. And in doing that, hopefully, we will improve the long-term prognosis of these patients."

A separate retrospective study by other investigators in 2004 reported that patients who wait 2 or more years for ACL reconstruction are nearly twice as likely to develop immediate meniscal pathology, compared with patients whose ACL was treated within 1 year, he noted.

Another retrospective study in 2005 reported that patients who waited 26 weeks or more for ACL reconstruction had a significantly greater risk of developing meniscal pathology, compared with patients who underwent ACL surgery within 2 weeks of injury.

Separate data have shown that "a meniscus tear is a strong independent predictor for the development of osteoarthritis," Mr. Akindolire said. ■