FAI FROM PAGE 41

occurs when the ischial spine projects into the pelvic cavity.

Coxa profunda is diagnosed on an AP view when the medial wall of the acetabulum lies on or medial to the ilioischial line. This measurement is highly variable and should not be used as a surrogate for a deep socket. Promtrosis, another cause of pincer impingement, is diagnosed on AP views when the femoral head crosses the ilioischial line.

Advanced imaging such as computed tomography (CT) and magnetic resonance imaging (MRI) is useful in further exploring the hip joint. The CT scan creates a three-dimensional image, which is helpful in surgical planning, while an MRI paired with a gadolinium arthrogram is useful in demonstrating acetabular pathology such as chondral damage and labral tears.

Treating FAI

Treatment of FAI can be nonsurgical or surgical. Nonsurgical management—activity modification, NSAIDs, and strengthening and range of motion exercises—can delay and sometimes decrease the necessity for surgical intervention.

Once conservative nonsurgical measurements have been exhausted, surgical management can address the structural factors that cause the impingement and the intra-articular pathology such as chondral and labral tears. Both open surgical interventions—including the mini-open approach, surgical hip dislocation, and periacetabular osteotomy (PAO)—and arthroscopic approaches are used to manage FAI. The technique chosen should take the patient’s age, range of motion, and activity level into account and be based on type and extent of pathology.

PAO is helpful when pincer impingement is due to acetabular retroversion with an associated posterior wall sign. Good to excellent results have been reported for such problems. If the impingement is due to the relative prominence of the anterior wall without the posterior wall sign, trimming the acetabulum arthroscopically or through a surgical hip dislocation is helpful.

Surgical dislocation of the hip with a trochanteric slide osteotomy was first described by Ganz and enables full circumferential visualization of the acetabular rim and femoral head-neck junction. The surgeon can then address the osseous deformity, perform labral debridements and osteochondroplasties, and treat other structural abnormalities that lead to extra-articular impingement. Although surgical dislocation has excellent results and patient satisfaction is high, recovery is slower than with arthroscopic treatment.

Improvements in arthroscopic techniques have made hip arthroscopy a viable treatment for FAI. These advances enable labral take-down and refixation, treatment of chondral injury, and osteochondroplasty of the femoral head-neck junction and acetabular rim. Studies have shown that surgical dislocation and arthroscopic treatments have comparable efficacy in surgical correction of FAI.

For more information and references for this article, please see the online version available at www.aaosnow.org

Ali Ashraf, MD, Rafael J. Sierra, MD, and Amy L. McIntosh, MD, are all affiliated with the Mayo Clinic in Rochester, Minn.

BONE QUALITY FROM PAGE 43

such as serum C-telopeptide, urine N-telopeptide, and osteocalcin may be useful in predicting fracture risk and in determining dose interval and management of therapies for patients.

“We need to know patient characteristics to better match therapies with the patient. We have to move beyond bone mass density (BMD),” she said. “We know that bone turnover itself is an increased risk for fracture. Patients with low BMD and high turnover are even more likely to experience a fracture.”

Basic counseling about falls and fall prevention can be helpful, she said. “Falls beget fractures. We can teach patients how they can fall better. These are low-energy associated fractures, from standing height or less. It is a myth that you break first and then you fall; 95 percent of hip fractures are associated with a fall.”

She advised physicians to take a fall prevention history of their patients, she said. “See if they are using the chair arms to stand. Can they stand on a single leg for more than 5 or 10 seconds? Medications can make them dizzy and more likely to fall.”

Basics of home safety should be explained, including better lighting, clearing objects from the floor, installing safety devices in the bathroom, and using assistive devices.

Faculty and attendees of the AAOS/ORS Bone Quality and Fracture Prevention Research Symposium. The symposium provided state-of-the-art information about bone quality, including the contribution of bone quality to skeletal integrity, noninvasive assessment of bone quality, and pharmacologic and surgical management of patients with impaired bone quality.

Disclosure information: Dr. Bukata—El Lilly, Amgen, Merck, Bone and Joint Initiative, ASBMR Practice Committee, AAOS PAC; Dr. Dell: No conflicts reported.

For links to more information see the online version of this article, available at www.aaosnow.org

Terry Stanton is senior science writer for AAOS Now. He can be reached at tstanton@aaos.org