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BROWSER'S NOTES

Genome-wide meta-analysis identifies 56 bone mineral density loci and reveals 14 loci associated with risk fracture
Estrada K, et al.
Nature Genetics (2012) 44:491–501

Bone mineral density (BMD) is the most widely used predictor of fracture risk. The authors conducted the largest meta-analysis on lumbar spine and femoral neck BMD, 17 genome-wide association studies that included 32,961 individuals of European and East Asian ancestry. The authors tested the top BMD associated markers for association with risk of low trauma fracture in 31,016 individuals with history of fracture. 56 loci (32 new) associated with BMD were identified. Some discovered loci were localized to genes not known to have a role in bone biology. 14 BMD associated loci were associated with fracture risk.

Intra-articular injection of hyaluronic acid is not superior to saline solution injection for ankle arthritis: a randomized, double-blind, placebo-controlled study
DeGroot H, et al.
JBJS(AM)(2012);94A; 2–8

64 patients with ankle osteoarthritis were randomly assigned to a single intra-articular injection of 2.5 ml of low molecular weight hyaluronic acid or 2.5 ml of normal saline solution. The primary outcome measure was change from baseline in the American foot and ankle society clinical rating score at six and twelve week follow-up examinations. A secondary outcome was patient reported with use of a visual analog pain scale. Eight patients withdrew from the study. At six and twelve weeks the hyaluronic acid group improved by 4.9 points and the saline group worsened by 0.4 points at six weeks and improved 5.4 points at twelve weeks. At 12 weeks both groups showed substantial improvement but the differences between the hyaluronic acid group and the placebo group were not significantly different.

Agreement in the classification and treatment of the superior labrum
Wolf BR, et al.
Am J Sports Med (2011) 39, 2588–2594

The purpose of the study was to evaluate intra-surgeon and inter-surgeon agreement in classifying superior labral variables and injuries and its influence on treatment choices. A group of arthroscopic shoulder surgeons watched 50 arthroscopic videos ranging from normal to pathologic on three different occasions who then selected a classification and treatment for each video. The first and third viewings had no accompanying clinical information while the second viewing was done with a detailed clinical vignette. The two viewings without clinical details resulted in surgeons selecting a different classification 28.5 % of the time between the two viewings. A third classification was provided when the viewing was accompanied by a clinical history, 71.5 % of the time. Treatment changed in 36 % and 69.1 % when viewed with and without clinical vignettes, respectively.

Which factors influence preservation of the osteonecrotic femoral head?
Lieberman J, et al.
Clin Orthop Relat Res. 2012 Feb;470(2):525–34.

Reviewing articles with level I to IV evidence between 1998 and 2010 assessing an operative intervention for osteonecrosis of the femoral head, the authors address the following questions:

1. Is there evidence to prefer one surgical treatment over the others?
2. The rates of radiographic progression or conversion to THA after treatment of pre and post collapse hips
3. Does lesion size influence progression of osteonecrosis?
4. Does extent of involvement of the weight bearing surface of the femoral head influence outcome?

54 of 488 manuscripts met inclusion criteria. No single operative procedure was superior to others. In pre and post collapse hips 31 % and 49 % respectively exhibited radiographic disease progression. There were lower failure rates when the lesion involved less than 15 % of the femoral head or had a necrotic angle of less than 200° (14–25 %) and when the osteonecrotic lesion involved only the medial 1/3 of the weight bearing surface (4.6 %). Operative intervention prevents collapse of small lesions of the femoral head or when a limited segment of the weight bearing surface is involved. There is a high progression rate after a femoral head saving procedure.

Abstracted by M. Sundaram, M.D.