

Browser's notes

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Relationship between humeral torsion and injury in professional baseball pitchers

Polster JM, et al.

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Twenty five major league baseball pitchers were recruited for evaluation of humeral torsion on dominant and non-dominant humeri using CT with a 3-d volume rendering post-processing program which was modified to model a simplified throwing motion and measure potential internal impingement. Players were followed for 2 years after CT and the number of days missed from pitching activities was recorded as a measure of injury severity and incidence. The mean dominant humeral torsion was $38.5 \pm 8.9^\circ$. The results confirmed the hypothesis that humeral torsion is inversely related to the incidence and severity of shoulder and other upper extremity injuries in professional baseball pitchers. Higher number of days missed correlated with lower degrees of humeral torsion.

Reliability and validity of measuring acetabular component orientation by plain AP Radiographs

Lu H, et al.

Clin Orthop Relat Res. 2013 2987–2994

AP radiographs and CT scans were obtained on 60 patients who underwent 60 primary total hip arthroplasties (THAs). The authors used the technique described by Jewinnek et al., for measuring cup anteversion on radiographs. Inter- and intra- observer reliability was close to perfect for anteversion and inclination measured on radiographs. There was no

significant difference on anteversion measurements between CT and radiographs permitting the authors to conclude that radiographs are as reliable and accurate as CT for measuring acetabular orientation.

Do bisphosphonates inhibit direct fracture healing? A laboratory investigation using an animal model

Savaridas T, et al.

Bone Joint J 2013; 95-b;1263–8

Because the effects of bisphosphonates on fracture repair had been assessed only in models of indirect fracture healing with callus; the authors tested the effects of the drug on direct fracture healing by using a rodent model of rigid compression plate fixation on a standard tibial osteotomy. Ten skeletally mature Sprague-Duwely rats received daily subcutaneous injections of 1 mg/kg of ibandronate and ten control rats received saline. Three weeks later a tibial osteotomy was rigidly fixed with compression plating and 6 weeks thereafter, the animals killed. Fracture repair was assessed with mechanical testing, radiographs and histology. Histological analysis revealed fracture union in the controls and impaired fracture healing with predominantly cartilage and undifferentiated mesenchymal tissue in the bisphosphonate group. The authors propose that bisphosphonate therapy be withheld until after a fracture has united if rigidly fixed and is undergoing healing.

Abstracted by M. Sundaram, M.D.
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