

Masterclasses

M3.4**Recent Advances in Management of Distal Radius Fracture****13:15 Room 423 & 424**

Soft Tissue Complication Associated with Distal Radius Fracture

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Closed reduction and plaster cast immobilisation remain the mainstay of treatment of stable distal radius fractures. For unstable injuries, surgical intervention is indicated. Advancement in surgical techniques and fixation devices over the past decades has enabled surgical fixation stable enough for early mobilisation of the wrist, which in turn hastens recovery. A lot of previously unrecognised soft tissue injuries left to heal through immobilisation were brought to light therefore. More rigorous assessment of outcome of this common fracture also contributes to the recognition of these pathologies. The more common soft tissue complications include triangular fibrocartilage complex (TFCC) tear, carpal interosseous ligament injury and median nerve compromise.

TFCC injury occurs in 40% to 70% of intra-articular fractures of distal radius in young patients. Left untreated, symptomatic distal radioulnar joint instability with chronic ulnar pain can develop. Carpal interosseous ligament injury, scapholunate and lunotriquetral ligaments in particular, can cause carpal malalignment. Pain and early osteoarthritis of the wrist can develop in malaligned carpus. These injuries can be diagnosed by careful pre-operative clinical and radiological assessments. Arthroscopic assessment of the wrist at the time of fracture fixation allows accurate diagnosis of these conditions. The development of "dry arthroscopy" decreases the risk of compartment syndrome associated with traditional arthroscopic technique requiring fluid insufflation of the joint.

Median nerve dysfunction can result from nerve compression by soft tissue swelling or haematoma, or contusion of the nerve diminishing its function masking the evolving compartment syndrome in the carpal canal. The latter mechanism has led to the practice of prophylactic carpal tunnel release by some surgeons in cases of high energy trauma.

Treating distal radius fractures, therefore, does not only involve bony fixation. Satisfactory outcome can only be obtained when associated soft tissue injuries are addressed.