Recent advances in wrist trauma

J. Terrence Jose Jerome · Balu Sankaran

© Society of Hand and Microsurgeons of India 2009

Scaphoid fractures are the most common type of carpal fractures and occur frequently in young men. Nonunion, avascular necrosis and osteoarthritis, are the complications caused by a delay in diagnosis and treatment, hence early diagnosis and treatment for such fractures are critical to achieve better outcomes [1]. The traditional clinical sign snuffbox tenderness was found no more useful in diagnosis of scaphoid fracture and authors have recommended early recourse to sophisticated imaging methods. A systematic review and meta-analysis compared the diagnostic performance of bone scintigraphy, MRI and CT for diagnosing suspected scaphoid fractures. Bone scintigraphy and MRI have equally high sensitivity and high diagnostic value for excluding scaphoid fracture, however, MRI is more specific and better for confirming scaphoid fracture. The study emphasized the need for paired design studies or randomized controlled trials to compare CT with MRI or bone scintigraphy. Similar study presented to the ASSH reviewed 100 consecutive patients who were suspected of having a scaphoid fracture on clinical grounds despite having normal findings on initial radiographs. They concluded that magnetic resonance imaging had a better predictive value, both positive and negative and was a reliable modality for screening missed out fractures. Displaced scaphoid fractures are often treated with screw fixation. Many studies have proven that computer assisted screw placement significantly reduce radiation exposure, time, and the number of attempts for guide wire placement [2]. Dias et al concluded that on longer-term follow-up, the outcome of cast

treatment of scaphoid fractures when compared with surgery showed that malunions were more common in the surgical treatment group and increased scapho-lunate angle were more likely in the casting group.

Distal radial fracture is a public health concern, particularly among the elderly who often experience fragility fractures. A recent prospective study evaluating the rate of functional improvement after treatment with the volar locking plating system demonstrated similar rates of recovery between patients in two age groups (20–40 years and >60 years). The volar maintains good anatomic reduction and makes it easier for elderly patients to resume to their day-to-day activities earlier than conservative cast immobilization. However, for elderly patients with lower disability due to mal-union and/or painful mal-union one may still prefer non-operative treatment. In another prospective randomized trial of patients with complex or unstable fractures of the distal part of the radius with one group having external and the other having internal fragment-specific fixation the conclusion was, the group with internal fixation had significantly better grip strength, wrist motion, and forearm motion with no difference in the DASH score. The long-term advantages of improved reduction after distal radial fracture remain unclear. The only available long term follow up study (33–42 years) by Forward et al. showed 68% of the patients with intra-articular fractures had posttraumatic arthritis and none had had salvage surgery [3].

Interestingly, a study revealed that most physicians with the primary designation as orthopedic surgeon still predominantly practiced closed methods for the treatment of distal radial fractures. Conversely, physicians with the primary designation as hand surgeon were much more inclined to employ internal fixation methods [4].

J. Terrence Jose Jerome¹ (✉) · Balu Sankaran²

¹Deputy Editor

Journal of Hand and Microsurgery

²Consultant, Department of Orthopedics,

Hand & Reconstructive Microsurgery

Apollo Speciality Hospitals

K K Nagar, Madurai 625 020.

e-mail:terrencejose@gmail.com

1. Dias JJ, Dhukaram V, Abhinav A et al. (2008) Clinical and radiological outcome of cast immobilisation versus surgical treatment of acute scaphoid fractures at a mean follow-up of 93 months. *J Bone Joint Surg Br* 90:899–905
2. Peter C Amadio (2009) What's New in Hand Surgery *J Bone Joint Surg Am* 91:496–502

3. Forward DP, Davis TR, Sithole JS (2008) Do young patients with malunited fractures of the distal radius inevitably develop symptomatic post-traumatic osteoarthritis? *J Bone Joint Surg Br* 90:629–637
4. Koval KJ, Harrast JJ, Anglen JO et al. (2008) Fractures of the distal part of the radius. The evolution of practice over time. Where's the evidence? *J Bone Joint Surg Am* 90:1855–1861