Recommendation for measuring clinical outcome in distal radius fractures – A core set of domains for standardized reporting in clinical practice and research

On behalf of the IOF-ISFR distal radius working group

Fractures of the distal radius are the second most commonly presenting fracture in the elderly and hence optimal and efficient management has potential for substantial impact.[1] More than 450,000 occur annually in the United States.[2] The common immediate symptoms of pain and temporary loss of upper extremity function cause short-term impact on quality of life and role functioning.3,4 A proportion of cases also experience long-term loss of upper extremity function and impaired role functioning.[3, 5, 6] Subsets of distal radius fractures (DRF) are potential sentinel fractures for underlying issues of bone strength .[7] The risk of recurrent fractures in the 10 years following a distal radius fracture is significantly higher than for those who have yet to experience a fracture; and is substantially elevated for those who have other osteoporotic fractures.8 High-energy fractures and fragility fractures require different levels of intervention for diagnosis and treatment. Whereas routine fracture treatment may suffice for many, fragility fractures may present the first opportunity to diagnose osteoporosis and potentially initiate treatment. Current evidence suggest certain populations who may respond to drug therapy for osteoporosis are undertreated.[9] We propose that early detection and treatment may prevent adverse outcomes in either pain disability or overall bone health and require standardized assessment approaches with valid instruments.

As common as this fracture is, current DRF literature highlights the lack of sufficient high-quality research to define intervention or evaluation of outcome.[10, 11] In particular, a lack of consistent measurement of outcomes has been cited as a limitation in current research.[11, 12] A solution to inconsistent or inadequate outcome evaluation in clinical studies and practice is the establishment of core consistent measurement that individuals would apply uniformly, and augmented as needed. Core sets define the essential set of measures or domains to be included in clinical research or practice in a given field.[13, 14] The International Classification of Functioning, Disability and Health (ICF) core sets are based on a process of delineating the categories from within this classification system that apply to a given condition (such as wrist fracture) and form what is reported to be a comprehensive foundation of content for outcomes in that area.[15, 16] The process for establishing these core sets depends on review of quantitative and qualitative evidence on disability for a specific patient population, consultation with experts and a consensus conference. For example, core sets in arthritis are derived by patient and provider consensus and measures are chosen based on evidence of their measurement properties.[17]

The Distal Radius Working Group of the International Society for Fracture Repair (ISFR) and the International Osteoporosis Foundation (IOF) identified a need for consistent measurement in DRF and established a process to move forward on identifying key measures that would be relevant for clinical practice and clinical research

The purpose of the working group was to review the literature on outcome measures used in distal radius fracture trials, cohort studies and case series and interpret those in light of future potential to contribute to a core set of domains.

More on this will be presented at this year's AAOS in Chicago. Friday March 22, 2013, at 8:30 AM in Room S102, McCormick Place.

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