Unstable fractures of the distal end of the radius

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Unstable DRFs SUMMARYSUflYDistal radial fractures are the most common fractures affecting theupper limb. They account for approximately one-sixth of all fractures seen and treated in the emergency rooms.Different authors used different criteria as basis for their classifications of DRF, but all authors accept the concept of having stable and unstable distal radial fractures.Unstable DRF are difficult to reduce anatomically and to be immobilized in a sound position with closed plaster support, and are associated with a high incidence of complications.There is still controversy surrounding the management of unstable fractures of the distal radius, despite the large numbers treated. Many different methods have been described including pins and plaster, closed Kirschner wire fixation, closed external fixation, combined external and internal fixation and a combination of external fixation and open bone grafting.In the present prospective study, surgical treatment of 63 unstable DRFs was done. Pre-requisites for surgical treatment were active patients, with unstable -DRFs with or without intra-articular involvement of either the radiocarpal, radio ulnar, or both articulations; when acceptable reduction can not obtained or severe instability resulted in redisplacement in the cast. The goal was always to obtain and maintain anatomic reduction to achieve full painless motion and powerful grip.- 272 -Unstable DREs- SUMMARYPatient's age varied from 18 to 80 years with a mean age of 46.8 years. Females form 51.6% of patients subjected to this thesis. The technique used for each fracture was individualized according to the personality of each injury. Surgical decision was percutaneous pinning in 45 fractures and external fixation + open reduction + percutaneous pinning in 18 fractures. Bone grafting was resorted to in 9 fractures. The mean follow-up period was 16.5 months with a range from 8 to 24 months.According to Van Der Linden and Ericson (1981) measurementsof radiologic parameters, the results were as follows:■ The mean volar tilt: pre-operatively:-20°,At final assessment: The sound side:10.2°, 14.4°,■ The mean ulnar tilt: pre-operatively:11.9°,At final assessment The sound side:17.4°, 21.1°,■ The mean radial height: pre-operatively:5.7 mm,At final assessment: The sound side:10.4 mm, 13.3 mm.The final radiological scoring according to Sarmiento and Latta's modification (1981) was graded as: satisfactory results 77.8% (47.6% excellent and 30.2% good) and unsatisfactory results 22.2% (14.3% fair and 7.9% poor results).- 273 -Unstable DBEs SUMMARYAccording to the scale of Jakim et at (1991) the clinical results wereas follows:•Mean wrist dorisfiexion: At the final assessment: 63.9° (93%)The sound side: 68.7°•Mean wrist palmar flexion: 55.1° (84%)The sound side: 65.5°■Mean wrist radial deviation: 18.7° (77%)The sound side: 24.1°•Mean wrist ulnar deviation: 26° (75%)The sound side: 34.6°•Forearm

pronation mean: 74.4° (92%)The sound side: 80.9°■Forearm supination mean: 73.3° (88%)The sound side: 82.7°■The final grip strength: 88%as compared to the sound side.■The total complication rate: 36%* The final total end results were graded as 66.7% satisfactory end results (35% excellent and 31.7% good) and 33.3% unsatisfactory end results (I 9% fair and 14.3% poor final end results).It is to be noted that early active mobilization of the wrist and fingers hastens functional recovery, produces less pain, stronger grip and causes earlier resolution of wrist swelling. So, it is associated with a lower rate of complications.While this study was not designed to compare the value of one type of treatment with another, it confirmed the findings of others that the reduction of inherently unstable DRFs must be maintained with percutaneous pinning or distraction fixation, otherwise a high rate of complications and a less favorable final outcome should be expected.