
Comparative study between conservative and surgical methods in the treatment of supracondylar fractures of the humerus in children

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Displaced supracondylar fracture of the humerus is the commonest fracture that occurs in the region of the elbow in children and accounts for 80% of elbow injuries, though supracondylar fractures only account for 3% of paediatric fractures. They are commoner in boys than girls, the left elbow is affected more than the right. The fracture is produced by a fall on outstretched arms with the elbow extended in the majority of the cases. The fracture occurs through the relatively weak portion of the lower end of the humerus between the condyles distally and the strong shaft of the humerus proximally. It may occur at any age from 3 to 12 years, with the greatest incidence between the ages of 5 and 8 years. There are three factors contributing to the predisposition of the juvenile humerus to a supracondylar fracture—ligamentous laxity, the relationship of the joint structures in hyperextension and the bony architecture of the supracondylar area. The small distal fragment is displaced posteriorly and upwards with anterior angulation in 99% of the cases (extension type). It is also displaced medially with lateral angulation and medial rotation in 75% of the cases, and it is displaced laterally in 25% of the cases with medial angulation and lateral rotation. The clinical diagnosis of the displaced supracondylar fracture is usually straightforward. The neurovascular state of the limb should be fully assessed. The objectives of treatment are to restore full function of the elbow and to avoid the complications of Volkmann ischaemic contracture and cubitus varus deformity. The former complication is, fortunately, rare