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Commentary

The Conservative Treatment of Some Hand and Carpal Fractures

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DESCRIPTION

The majority of hand fractures can be effectively treated without surgery. Nevertheless, in the recent decades, there has been a trend towards increased use of operative treatment. In this article, some hand fractures that can be managed safely without surgery are discussed based on published evidence and my personal experience.

The dogma that metacarpal neck fractures should be reduced in the presence of palmar angulation exceeding 30 to 40 degrees must be challenged. Nonoperative treatment with a functional brace for 4 weeks, applied without attempt of fracture reduction and leaving the fingers free to move, can be used even in the presence of a palmar angulation of 60 to 70 degrees. Also, most single fractures of the metacarpal diaphysis can be treated conservatively in the same manner. However, angulation creating a severe dorsal prominence at the fracture site is an indication for operative treatment. In these cases, I recommend closed reduction and, whenever possible, percutaneous pinning or an intramedullary screw inserted through the MCP joint. Plates have very limited or no indications in treating metacarpal fractures. Reduction and operative fixation are often indicated for displaced intra-articular fractures of the metacarpals and the phalanges. Conversely, many extra-articular phalangeal fractures can be treated nonoperatively. The maximum benefit of conservative treatment is obtained in those fractures that can be treated with early-sometimes immediate-mobilization. As a rule, partial active range of motion, or intermittent out-of-protection early active motion for a few sessions daily should start within 2 to 3 weeks. However, in contrast to metacarpal fractures, many spiral or oblique diaphyseal fractures of the finger phalanges are likely to be unstable and cause important rotational deformity. Plate and screw fixation may be tempting but this technique should be considered with great care: Despite the advantage of offering stable fixation and thereby the possibility of very early mobilisation, there is an increased risk of ending up with reduced mobility.

There also is an increasing trend to treat undisplaced or minimally displaced waist fractures of the scaphoid with screw fixation rather than non-operatively with immobilization in a cast. Alternatively, one can adopt a so-called "aggressive conservative treatment": Initial cast immobilisation, careful assessment of fracture-healing after 6 to 8 weeks with plain radiographs, and CT scans if necessary. If at that time a gap is identified at the fracture site and if there is no evidence of partial (i.e., at least 50%) union, surgical fixation with a percutaneous screw can be performed. This strategy may also be used in the case of undisplaced proximal pole fractures.

CONCLUSION

In conclusion, open reduction and internal fixation of fractures inevitably carry a risk of surgical complications that often can be avoided by using appropriate conservative treatment and this risk often outweighs the advantages of a "perfect" fracture reduction. When facing a fracture in the hand the first consideration is whether the fracture can be treated nonoperatively, and not which operative treatment is most appropriate. Conservative treatment of hand and carpal fractures involves non-surgical approaches aimed at facilitating healing and restoring functionality without the need for surgical intervention. The choice between conservative (non-operative) and surgical treatment depends on various factors including the type and severity of the fracture, patient's overall health, and the presence of associated injuries.

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