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Mallet Fracture

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Dear Editor

Considering the interesting article in the last journal edition about PIP FX-DX, it seems necessary to pay more attention about its nearest joint, DIP dorsal fracture or mallet fracture. Traditionally, most of these types of injury are managed nonoperatively unless volar subluxation exists as a result of more than 40% dorsal base fractures (1). In the presence of large dorsal fragment volar subluxation could be seen after hyperextension of DIP joint and must be prevented, otherwise simple extension splinting for 4-6 weeks is an acceptable treatment modality. Alternative treatment is simple DIP pinning in extension in high demand patients or uncooperative ones. Main treatment controversy is presence of large dorsal fragment with or without volar subluxation, both operative and nonoperative treatments were reported with acceptable results (2).

Operative Treatment

Two mostly used operative techniques are open reduction and extension block pinning. Open reduction is technically difficult because of risk of thin skin problem and comminution of small dorsal fragment. Multiple dorsal H, Y or lazy-S incisions are used according to surgeon preference during this procedure and fixation achieved by k-wire or pull-out suture technique. Extension block pinning is a technique to reduce risk of open surgery in these types of injuries (3). A 0.035 or 0.045-inch k-wire is inserted into the head of middle phalanx in 45 degrees angulation to buttress distal fracture fragment and DIP joint fixed in extension by another pin for 4-6 weeks. Main indications are large dorsal fragment and palmar subluxation. As a result of joint transfixing, risk of permanent DIP motion limitation must be kept in mind (4). In conclusion, mallet fracture is a common traumatic hand lesion treated both operatively and nonoperatively with acceptable outcomes, although permanent dorsal lump and some residual loss of flexion or extension lag are two most permanent deficits of these lesions and patient must be informed about these frequent complications.

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