Distal Radius Malunion: A Cheap Surgery
Case Report

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ABSTRACT

Introduction: Malunion is a common complication of distal radius fractures. The incidence after conservative treatment is 25% and after surgery is 10% [1]. After distal radius malunion, different surgical procedures have been described, such as fixation with K wire, plate, use of external fixator and frequent locking plate application [2-3]. According to the surgical procedure to be applied, some authors prefer dorsal approach [4], some lateral approach [2], and many authors prefer palmar henry approach [5]. In our case 32-year-old patient who was operated by neurosurgery after traffic accident. Two months after the operation, the patient came to the orthopedics clinic. Distal radius dorsal angle malunion was detected after x-ray control. We choose dorsal approach and using only K wire in surgery. Conclusion: In this case we understand that, in distal radius extra articular malunion surgery, preferring dorsal approach and using only k wire can be good results like the other surgery procedures.

Keywords: malunion, distal radius, osteotomy, dorsal approach, K wire

1. INTRODUCTION

Malunion is a common complication of distal radius fractures. The incidence after conservative treatment is 25% and after surgery is 10% [1]. After distal radius malunion, different surgical procedures have been described, such as fixation with K wire, plate, use of external fixator and frequent locking plate application [2,3]. According to the surgical procedure to be applied, some authors prefer dorsal approach [4], some lateral approach [2], and many authors prefer palmar henry approach [5]. In our case 32-year-old patient who was operated by neurosurgery after traffic accident. Two months after the operation, the patient came to the orthopedics clinic. Distal radius dorsal angle malunion was detected after x-ray control. Left wrist minimally invasive dorsal approach surgery planned. Oblique osteotomy was performed in malunion area. One K wire sent obliquely to radial styloid to osteotomi area. Two K wires used for adjusting the radial length. The patient was followed for 6 weeks. There is no radius shortening, loss of function, angulation, and no nerve damage after 6 weeks. Full bone healing was detected (figure 1).
2. CASE REPORT

A 32-year-old male patient was operated by brain surgeon because of epidural hematoma. Patient came to orthopedic clinic 2 months later. After anterior-posterior and lateral (figure 2) x-ray graph we saw 35-degree dorsal angled distal radius malunion fracture. The patient had a minimally invasive and low-budget surgery request. We preferred fixation with only K wire and dorsal minimal invasive approach, that was not applied frequently.

Fig. 1: Post left wrist minimally invasive dorsal approach surgery

Fig. 2: X-ray upon presentation
3. DISCUSSION

Many studies have demonstrated that corrective osteotomy which restores anatomical configuration can affect an improvement in wrist function, forearm rotation, grip strength and pain [7]. Usually, an opening wedge osteotomy using dorsal plates and bone grafting has been performed for malunited Colles’ fractures [8]. The present study showed that a corrective osteotomy using only K wires could effectively produce a significant improvement in wrist function in patients treated for extra-articular distal radius malunion. We obtained an excellent correction of deformity based on radiographic parameters, with low morbidity and no non-unions. The volar approach and the use of locking plates is an extremely effective and safe technique; in fact, the use of fixed-angle locking plates reduces the risk of postoperative bone displacement, and requires a shorter immobilization time [9, 10]. In this case we believe that dorsal approach and using only K wire is effective and safe technique too.

4. CONCLUSION

In this case we understand that, in distal radius extra-articular malunion surgery, preferring dorsal approach and using only k wire can be good results like the other surgery procedures.

REFERENCES

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