

WRIST ARTHRODESIS: A SALVAGE FOR FAILED WRIST RECONSTRUCTION

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Introduction: Wrist arthrodesis is an accepted surgical option for various end-stage wrist conditions, ranging from single to total joint fusion. It achieves pain elimination at a cost of mobility while retaining acceptable hand function. There are many alternatives in performing fusion which include using bone graft stabilization, intramedullary pin/rod, staples, standard compressive plate and precontoured plate. Among these, rigid plating reinforced with bone graft yields higher union rate.

Discussion: A 35 year old gentleman had a motorvehicle accident in 2016. He sustained closed intra-articular fracture of distal end left radius and ulna for which variable angle locking plate was inserted over radius. He recovered well post operation, however presented 1 year later with complex regional pain syndrome and impaired wrist motion resulting in functional disability. Local examination noted ulna deviation, dinner fork deformity, restricted active and passive wrist motion and limited forearm rotation. Radiograph showed implant failure, medialization of carpal bones, ulnocarpal impaction and DRUJ arthrosis. He underwent removal of implant, wrist arthrodesis and Darrach procedure. Intra-operatively proximal row carpectomy done and used as autologous bone graft. A dorsal wrist fusion plate was inserted. We performed distal ulna resection (Darrach) for DRUJ dysfunction to restore forearm rotation. Radiological wrist fusion was seen 2 months postoperative. He experienced good pain relief, regained full forearm rotation and good grip strength which aided him to progress well with overall improvement in performing daily activities and job tasks.

Conclusion: Wrist arthrodesis remains as an established wrist salvage procedure with predictable pain relief, patient satisfaction and improved functional outcome. Among many techniques, dorsal plate insertion shows higher rates of fusion in post-traumatic wrist condition. In addition, complications rates were much lower in precontoured dorsal plate fixation than other methods of fusion.