

AO/ASIF TOTAL WRIST FUSION

Indications
 Post-traumatic arthritis
 Rheumatoid arthritis
 Failed wrist arthroplasty
 Tumour resection
 Spasticity and paralysis

Joints
 Radio-scaphoid
 Radio-lunate
 Capito-lunate
 Capito-scaphoid
 Capito-metacarpal-III

Alternatives
 Dorsal plate
 Intramedullary pin (Mannerfelt)
 Kirschner wire
 Cerclage wire
 Cortical graft

Ideal position
 +10 to 15° extension
 5° ulnar deviation

Technique
 Straight dorsal incision
 Reflect extensor retinaculum (step cut optional)
 Expose wrist through floor of 2nd to 4th compartments
 Find and divide PION
 Incise and reflect wrist capsule to expose lunate, scaphoid and capitate

Remove dorsum of exposed carpus, distal part of radius including Lister's tubercle and base of third metacarpal

Apply AO-ASIF wrist fusion plate
 Distal screw in first

Align plate over radius and check position

Apply remaining screws

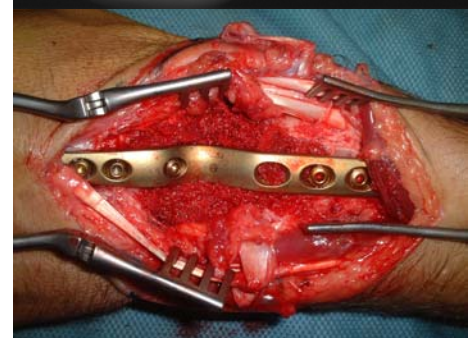
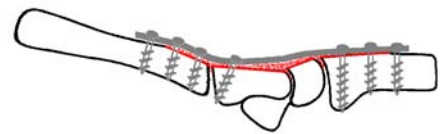
Check X-Ray

Harvest iliac crest cancellous bone graft and apply to denuded bone surfaces

Close capsule and retinaculum over plate

Skin closure ± drain

Well padded dressing including a volar cast



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Rehabilitation	<ul style="list-style-type: none">ElevateMobilise fingers and thumbDrain out (iliac crest/wrist) 24hrDressing off and suture removal at two weeksProvide with protective thermoplastic splint for intermittent usageRadiograph at 6 weeksDiscard splint and use as judged by radiological and clinical signs
Complications	<ul style="list-style-type: none">Wound (Wr+Crest)Infection (Wr+Crest)Haematoma (Wr+Crest)Sensory loss (Wr+Crest)Finger stiffnessPain from DRUJPlate prominenceTendon ruptureNon-unionFracture
References	<p>Houshian S, Schroder HA. Wrist arthrodesis with the AO titanium wrist fusion plate: a consecutive series of 42 cases.</p> <p>Zachary SV, Stern PJ. Complications following AO/ASIF wrist arthrodesis. Br J Hand Surg 1995, 20A, 339-44.</p>