

Chronic Distal Radio-ulnar Joint Instability Correction with Sigmoid Notch Osteoplasty : A Case Report

¹Vwrene C, ¹Jeyasilan K, ¹Jeremy S

¹Department of Orthopaedics and Traumatology, Upper Limb and Microsurgery Unit, Hospital Kuala Lumpur.

INTRODUCTION:

Volar instability of the distal radio-ulnar joint(DRUJ) is a rare condition described in literature¹. DRUJ stabilizers consists of soft tissue components and the sigmoid notch osseus configuration.

REPORT:

A 21 year-old, left-handed lady, complained of right wrist pain and instability for 13years, first noticing her symptoms after a fall. Physical examination revealed no gross deformity. There was a reproducible clunk over the DRUJ upon supination. The dislocation was spontaneously reducible upon pronation. Ulnar foveal sign was negative. Wrist ballottement² was positive. Radiographs showed widened DRUJ. CT revealed a ski-slope sigmoid notch³.(Fig 1)



Figure1:A,B-Wrist radiographs; C-Ski-slope sigmoid

PROCEDURE:

The procedure was performed under general anesthesia. A longitudinal incision was made over the volar surface of the wrist, overlying the palmaris longus tendon. The median nerve and PL were retracted ulnarly, FCR radially. The pronator quadratus was released from its ulnar border. After partial capsulotomy, the radioulnar joint was exposed, avoiding exposure of the radiocarpal joint. 3 Osteotomies were done -2 transverse,(2mm,5mm) from the radiocarpal articular surface, one longitudinal in between the former, to create a concavity(Fig2). Osteotomy site was packed with bone graft and secured with mini-plate. Immediate stability was achieved, wrist ballottement was negative. Transfixation of

the DRUJ with 1.0mm K-wire was done to facilitate union, and was removed after a month. Thereafter, patient was sent for rehabilitation with range, strengthening and proprioception exercises.



Figure 2:A-Osteotomy sites; B,C - Reduced DRUJ

CONCLUSION:

The osseus anatomy of the sigmoid notch plays an important role in DRUJ stability. Sigmoid notch osteoplasty is an example of a corrective procedure to restore stability to the DRUJ.

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