

## **DISTAL INFERIOR RADIO-ULNAR JOINT**

### **Anatomy**

Sigmoid notch: Arc of radius is 105° and ulna is 50°.

**Ulna Variance** [minus means distal end of the ulna is proximal to radius]

Ulna -ve variance has been implicated in the etiology of Keinboek's AVN of lunate

Ulna +ve variance: Increase load on TFCC; Ulnar impingement syndrome

### **Stability of DRUJ**

1. Sigmoid notch
2. TFCC
3. Volar and Dorsal RUL
4. ECU and its sheath
5. Ulnocollateral ligament
6. Pronator quadrates
7. Interosseous membrane

### **Function of TFCC**

Shock absorber

20% load transfer

Stabilization of DRUJ

Increase articular surface area

### **TFC [Triangular fibrocartilage]**

It extends from the sigmoid notch to the base of styloid process of ulna

Disc is thinner in the centre than periphery. [2mm Vs 5mm]

Periphery forms Volar and dorsal RU ligament.

Ulnar -ve hand have thicker and +ve have thinner TFC

## **TFCC tear[Palmer's classification]**

Class I Traumatic	A. Central perforation B. Medial avulsion ulnar attachment: with or without ulnar styloid # C. Distal : Detachment of carpal attachment D. Lateral: avulsion radial side
Class II Degenerative	Thinning of the TFCC Above with chondromalacia Lunate and Ulna Tear of the TFCC. Tear with VISI Tear of TFCC with arthritis of Ulna-carpal joint

## **Treatment**

Type I Traumatic: Immobilisation or Surgery

Peripheral tear: repair

Central tear: debride

Type II Degeneration Cortisone or cast for 4 weeks

Debridement or

Ulnar shortening: Open or Arthroscopic wafer

## **GALLEAZZIA FRACTURE WITH INFERIOR RADIO-ULNAR DISLOCATION**

Fix the radial fracture anatomically

If the joint stable on supination and pronation, then below elbow slab for 6 weeks.

If the joint is unstable in pronation and stable in supination: Above elbow cast in supination for 6 weeks

If unstable in supination and pronation: K wire across inferior radio-ulnar joint

If Irreducible: open reduction

In chronic and symptomatic situation: Reconstruction of ligament or

SKP [Sauve Kapandji Procedure]

## Kapandje Procedure

**Indication:** Post traumatic pain in the inferior Radio-ulnar joint

**Outcome:** 84% of grip, forearm rotation improved by 60°

Flexion and extension: not much improvement

### Technique:

Ulna exposed through the 5<sup>th</sup> compartment

Extra-periosteal ulna resection

[ block of 2 cm bone about 3 cm proximal to the distal end]

The head and styloid process left in situ

Resection of cartilage of distal Radio-ulnar joint with a curved osteotome.

Use Image intensifier to accurately reducing in the ulnar height

2 transverse screws to fix the head of ulna to the radius

Interposition of pronator quadrates to ECU sheath at the gap

Short arm cast for 6 wks.



## Darrach's procedure

Excision of the distal end of ulna

Only 50% had satisfactory result.

Poor results was associated with

osteoarthritis of the wrist, Algodystrophy,

Short ulnar remnant.

After Darrach's: significant weakness of grip,

IRUJ instability, carpal collapse, ulnar translation

