

Pulled Elbow

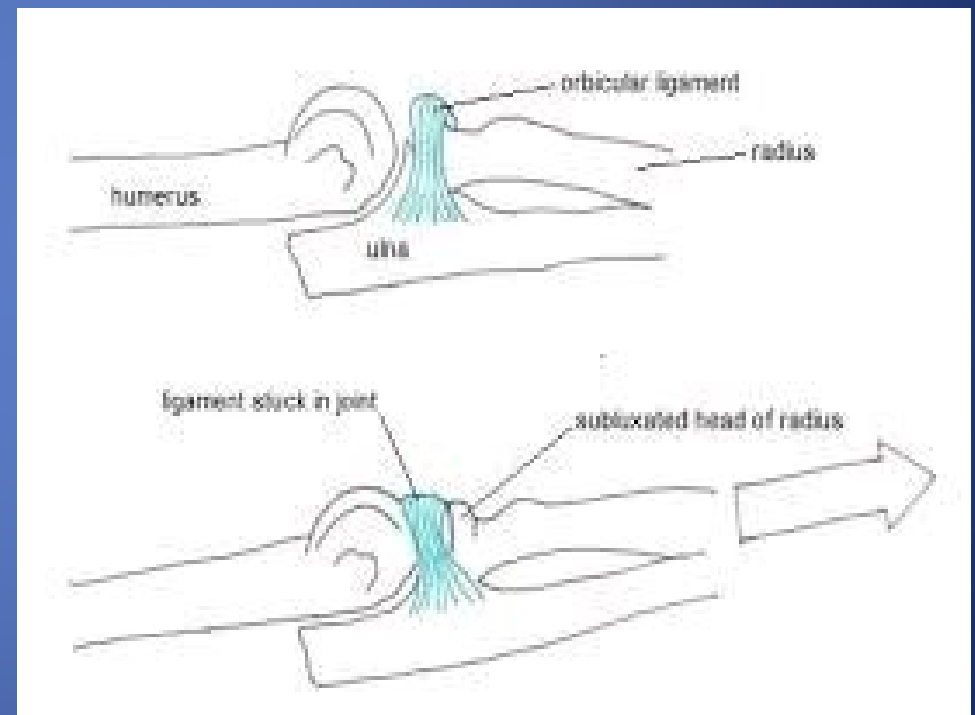
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Pulled Elbow (nursemaid's elbow)

Annular ligament interposition

- Results from a sudden pull on the arm, which pulls the radius through the annular ligament which may partially tear and become entrapped between the radial head and capitellum, resulting in subluxation of the radial head.



Symptoms and signs

- Pain
- Refuse to use their arm after a pulling incident
- The arm is held slightly flexed and twisted inward
- no swelling or bruising
- Referred pain-wrist or shoulder



Investigations

- Clinical diagnosis
- X ray
- USG
- MRI

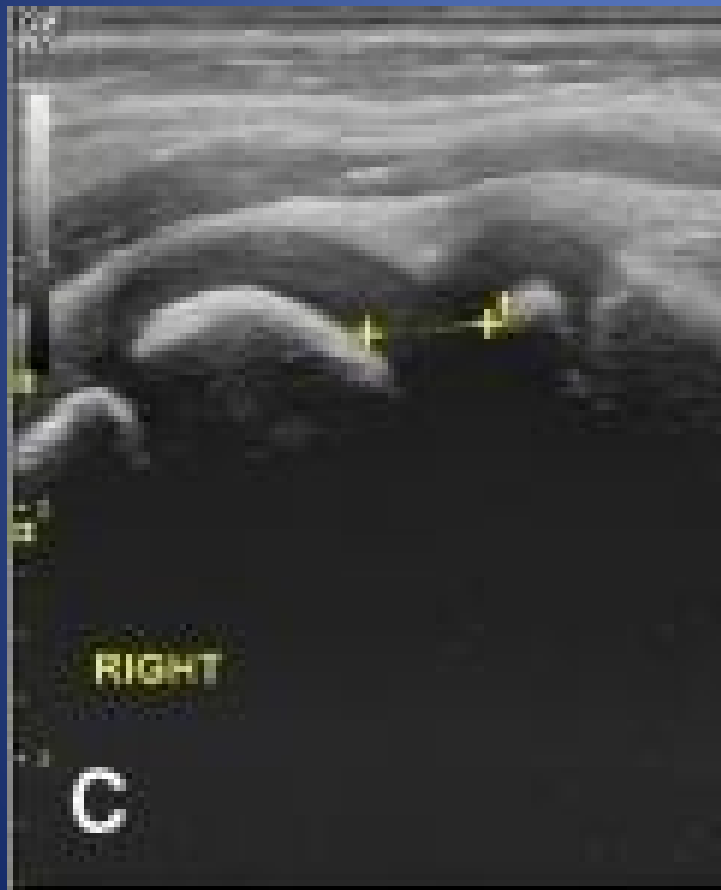
Ultrasound

- Increased radio capitellar distance
- Entrapment of annular ligament- J sign



Increased radio capitellar distance

normal



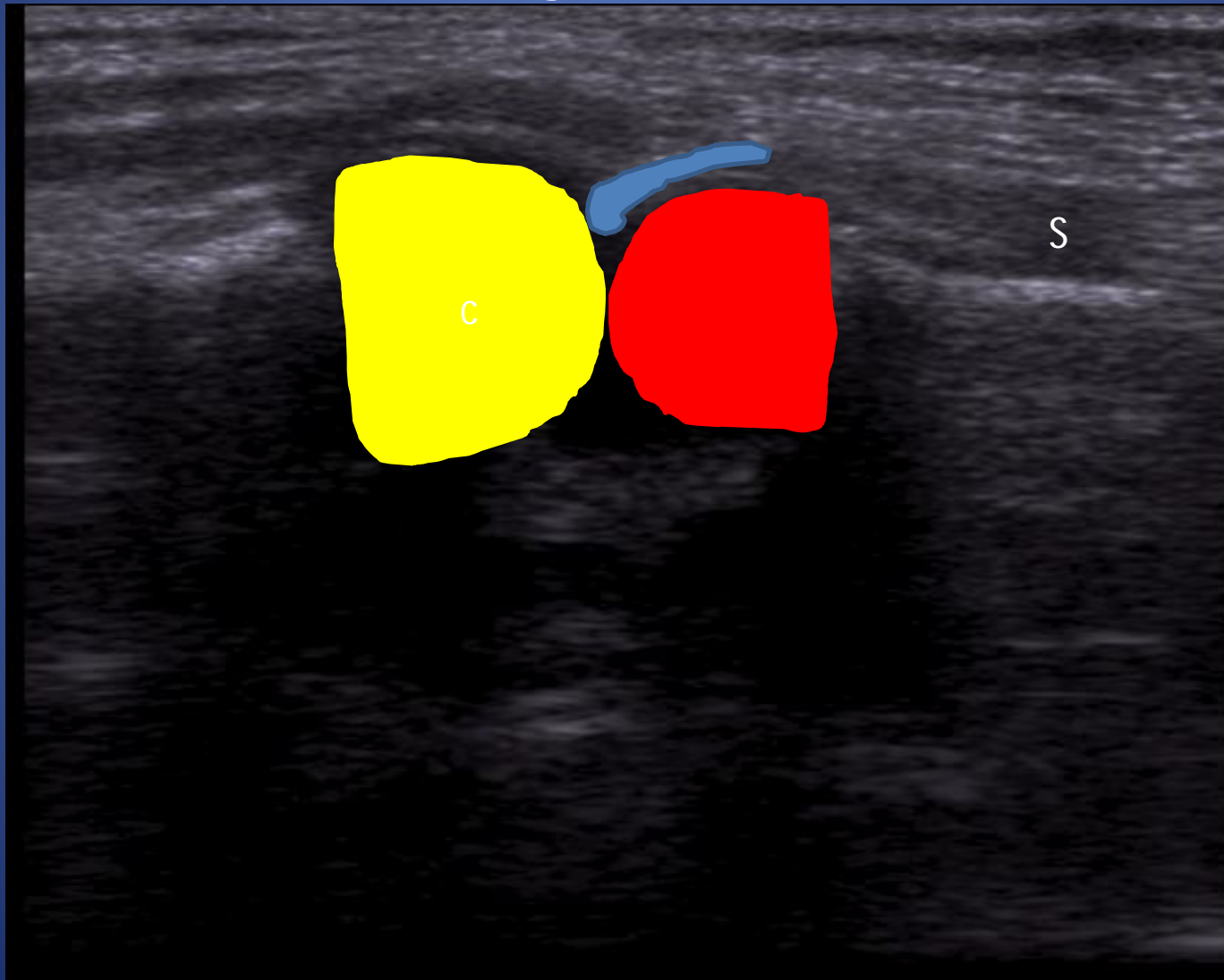
Increased distance



Ultrasound classification

- **Type I** : radial head subluxation, **annular ligament interposition**
- **Type II** : radial head subluxation with **annular ligament tear**

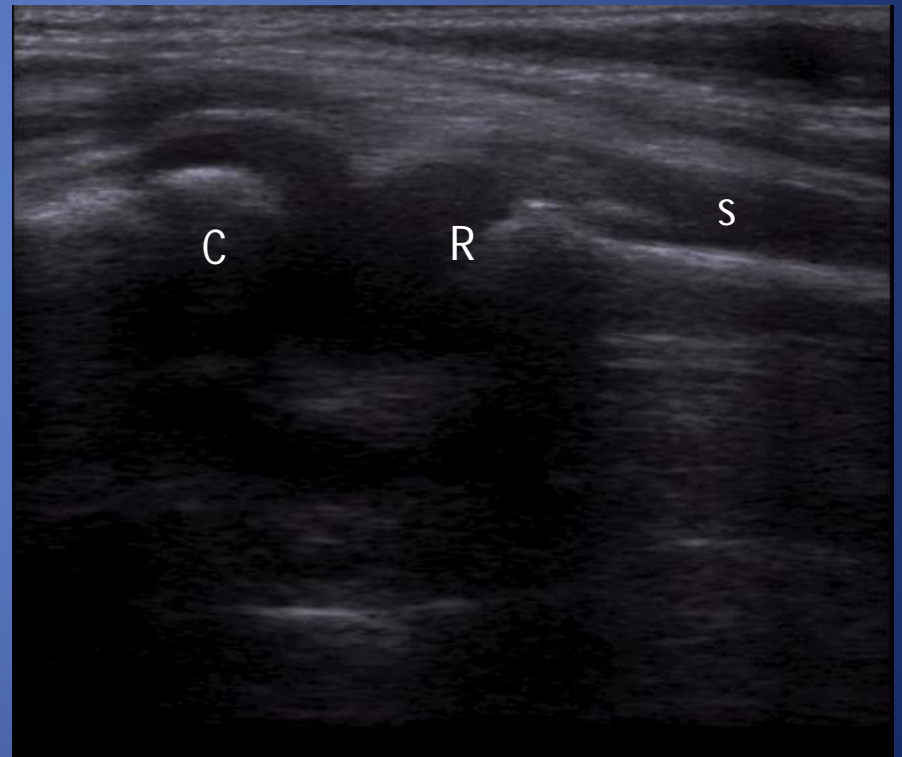
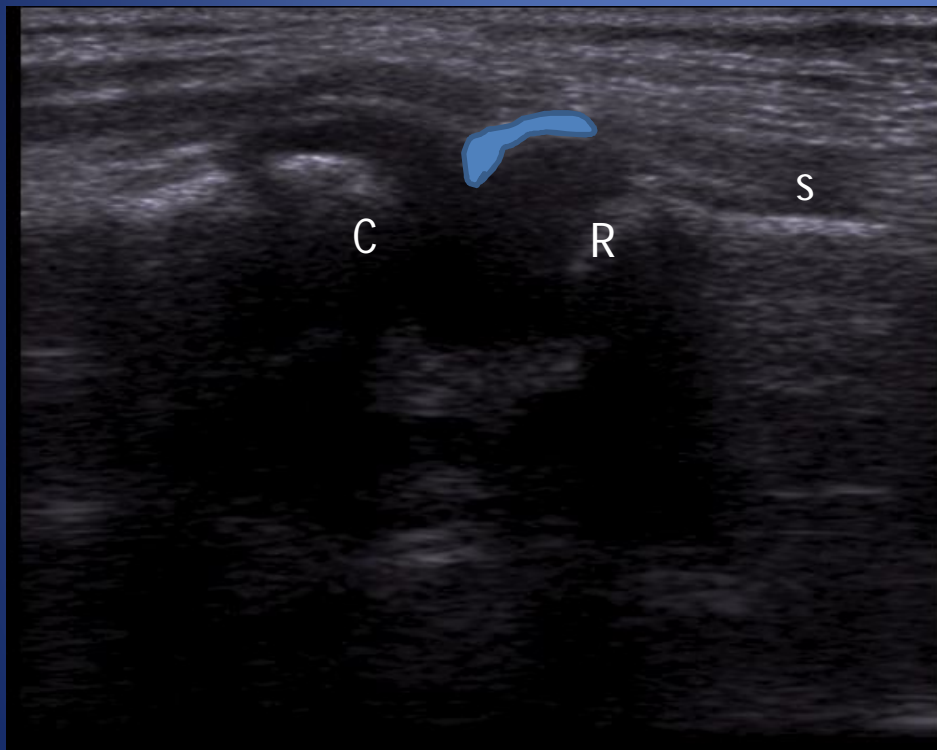
J sign- interposition of annular ligament

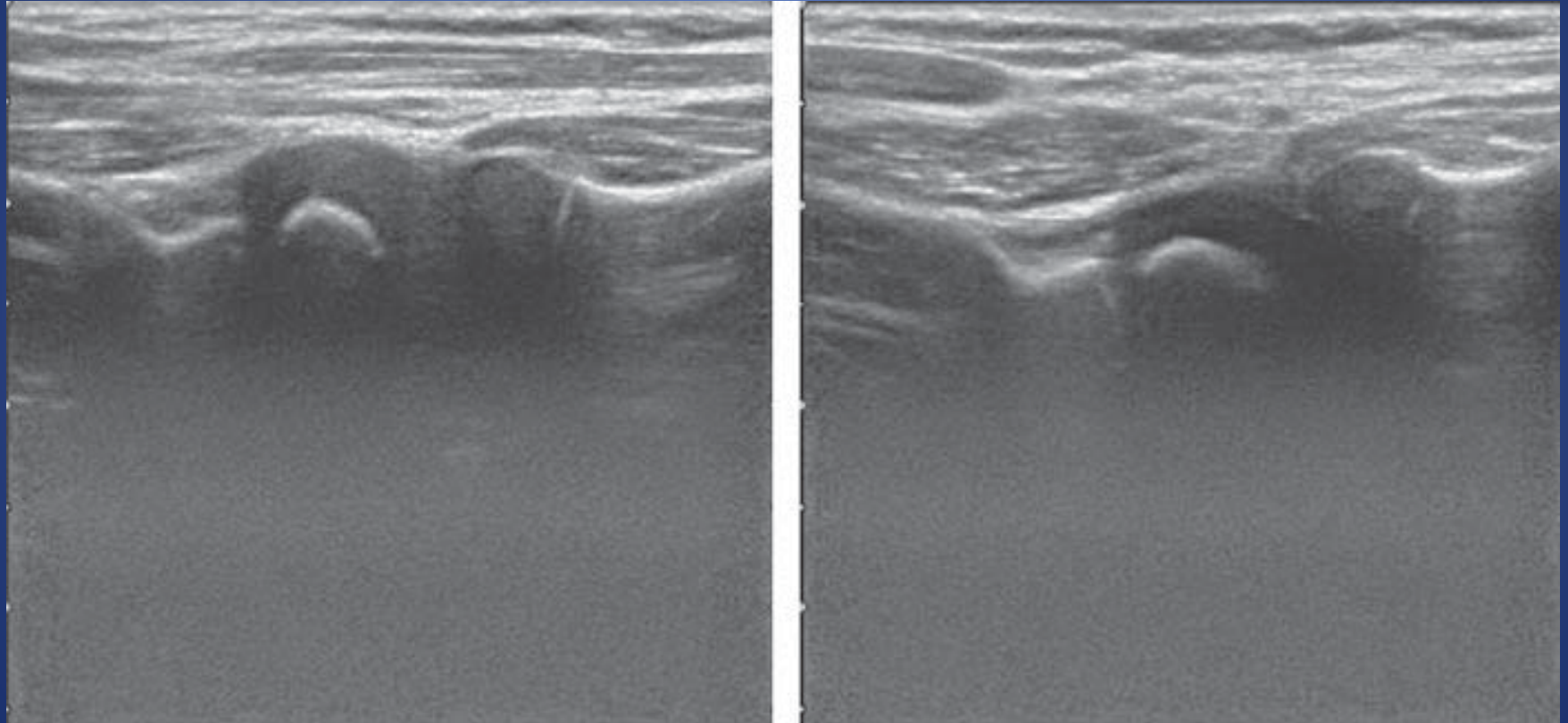


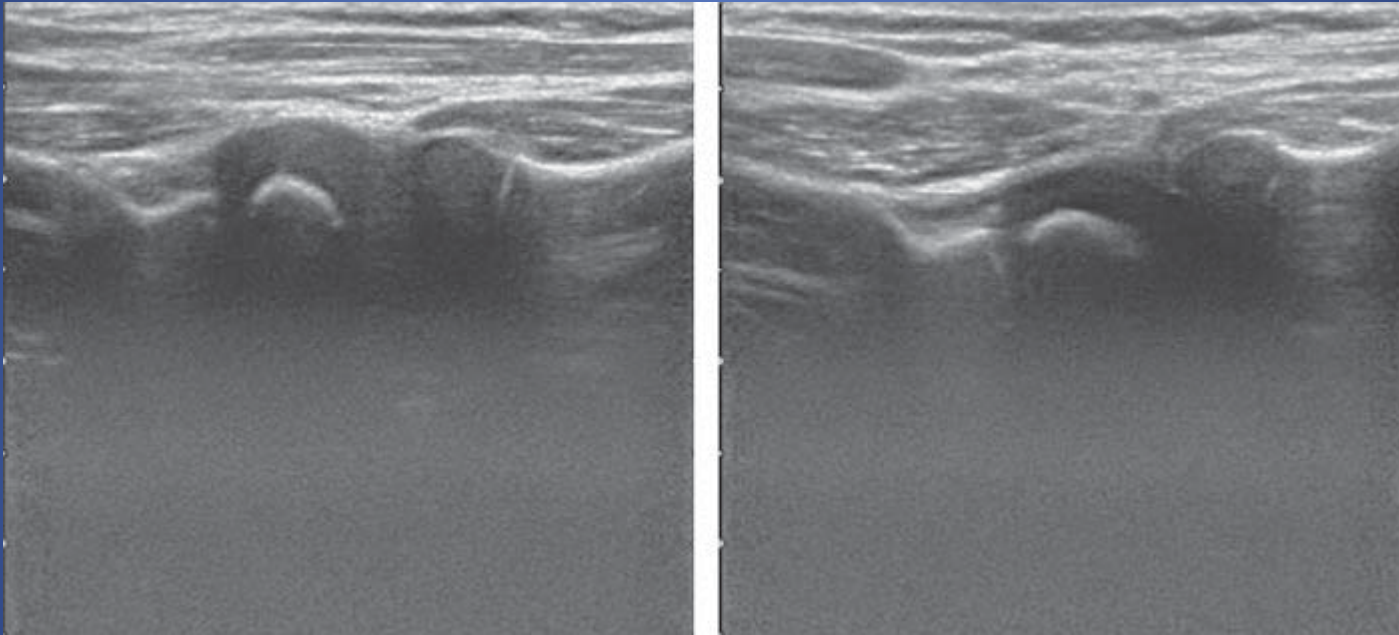
J sign

Before manipulation

After manipulation







Indication for splinting

- Type 1: Entrapment- no splinting
- Type 2: Annular ligament tear- splinting for 10-14 days

Supination flexion maneuver

- Apply pressure over radial head



Supinate the forearm



Flex the elbow



Pronation maneuver



Pronation maneuver

Step 1



Pronation maneuver

Extension in pronation



Flexion in Pronation



Problem situation

- The absence of reduction click and the failure of immediate improvement in some children following reduction may be because of the torn subluxated annular ligament
- Recurrent pulled elbows are treated with simple reduction maneuver
- A splint may be used cases of annular ligament tear for 10-14 days
- Swelling -Radiographs or MRI - likely to have a fracture



Thank You

