

Thumb Ulnar Collateral Ligament Injuries

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Thumb UCL Injuries

- Introduction
- Assessment
- The Value of Ultra Sound.
- Surgical Techniques and Tips
- Case Discussion
- The Sunderland Management System
- Summary

Anatomy

UCL INJURIES

Assessment

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Injury Mechanism



History

- 38 year old male factory worker
- At work, injured R thumb
- Previous injury to thumb 5 years before
- Motor bike accident
- UCL repair R thumb
- Pain at base of thumb
- No instability

Standard X-rays

- AP and Lateral
- No Bone injury
- No subluxation/dislocation

X-rays



What Next ?

Ultra Sound



US Report

- Done 4 Weeks from injury
- Thickening of UCL.
- No Displaced Rupture
- Thickening over ulnar dorsal aspect.
- ? Dorsal capsular tear.
- RCL Normal
- Volar Plate Normal
- Suggest, Conservative Treatment.

Subsequent Management

- Reviewed in clinic with US results
- No clinical instability
- No surgical intervention
- Continue with rest and splint.
- Discharged 5 weeks after re-injury

Time for Surgery



SURGICAL TREATMENT

Surgical Technique

- Preparation
- Equipment
- Exposure
- UCL Repair
 - Techniques
 - Materials
- Post-op Care
 - POP
 - UCL Splint



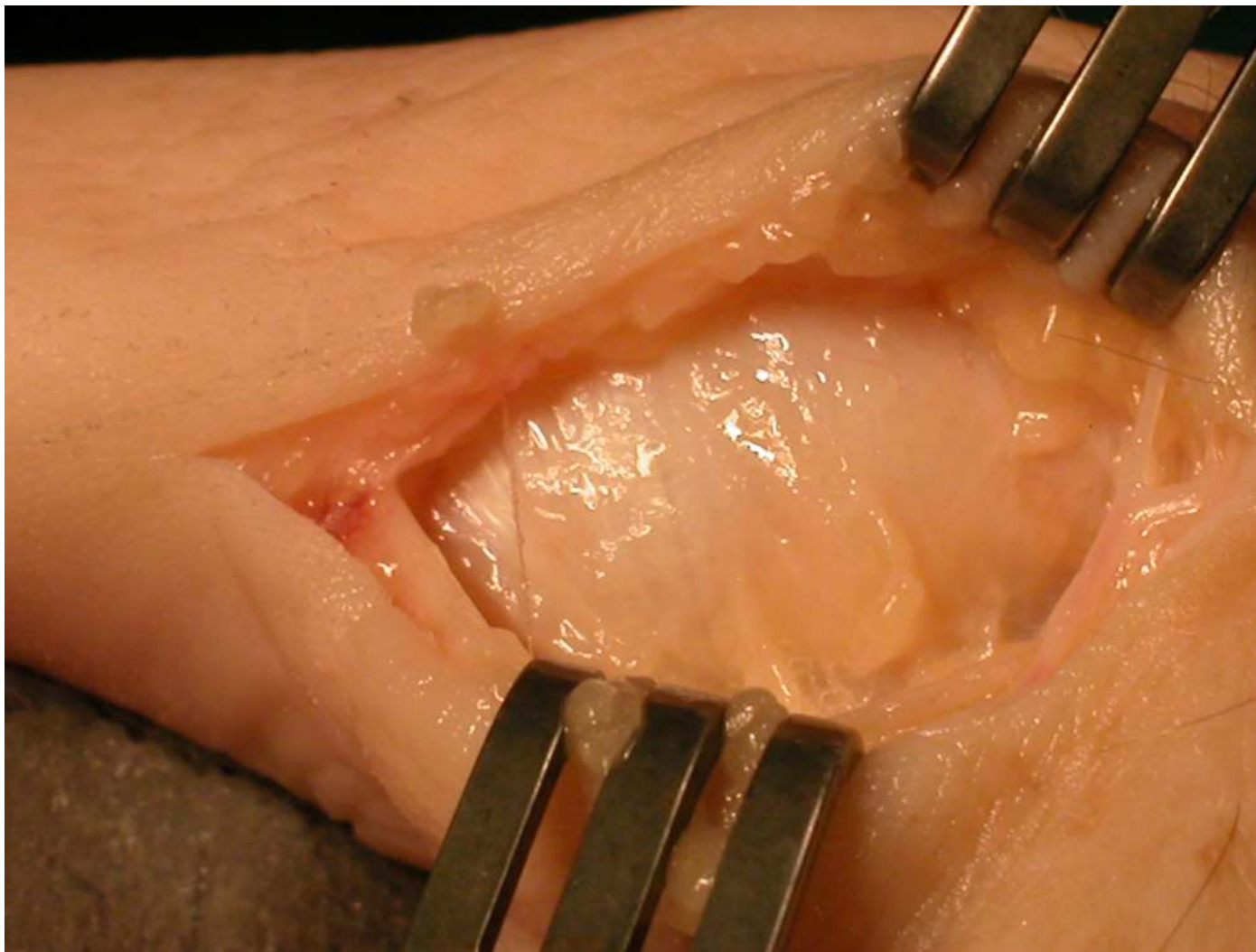
Skin Incision Marked



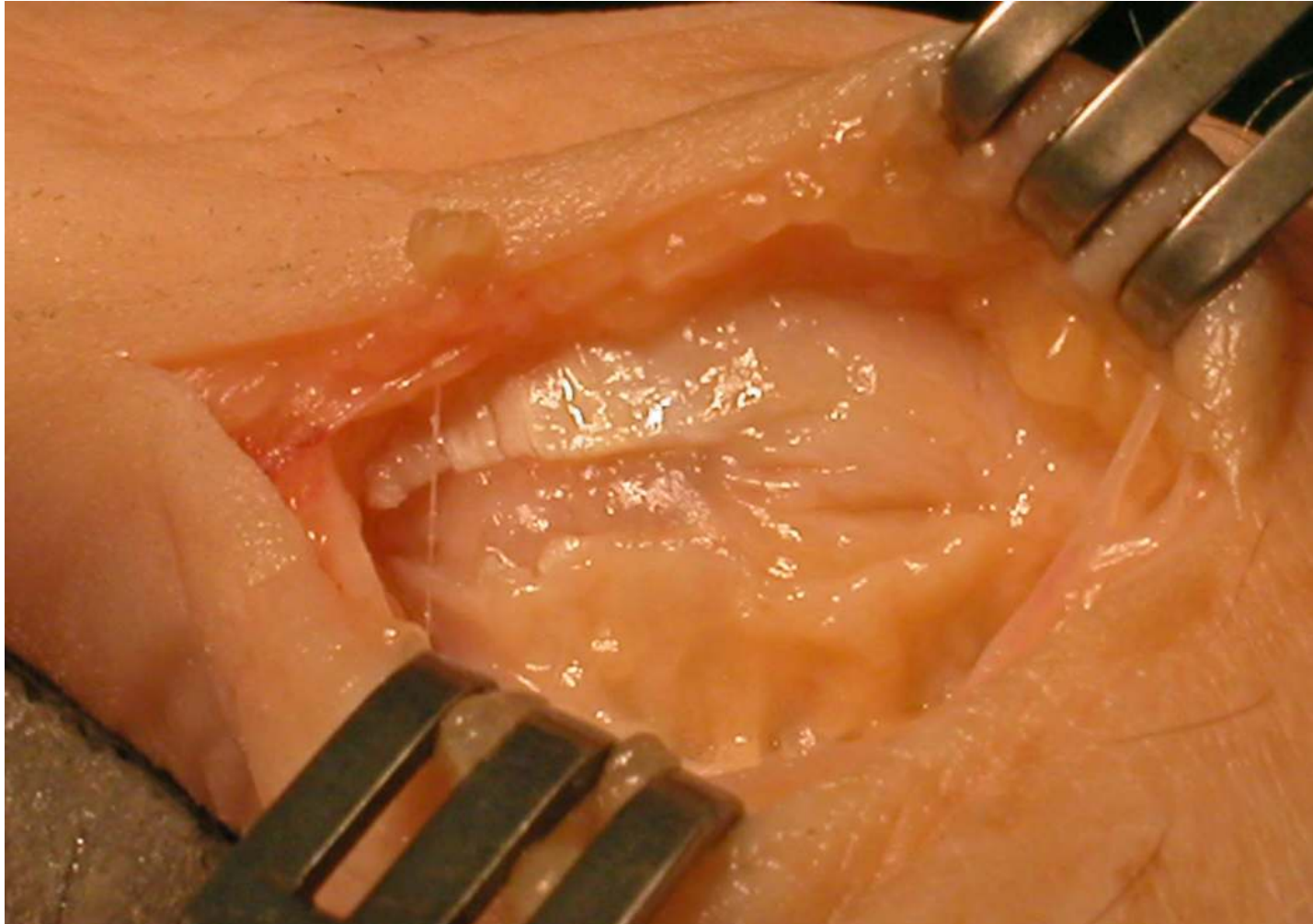
Position on Table



AA Exposure



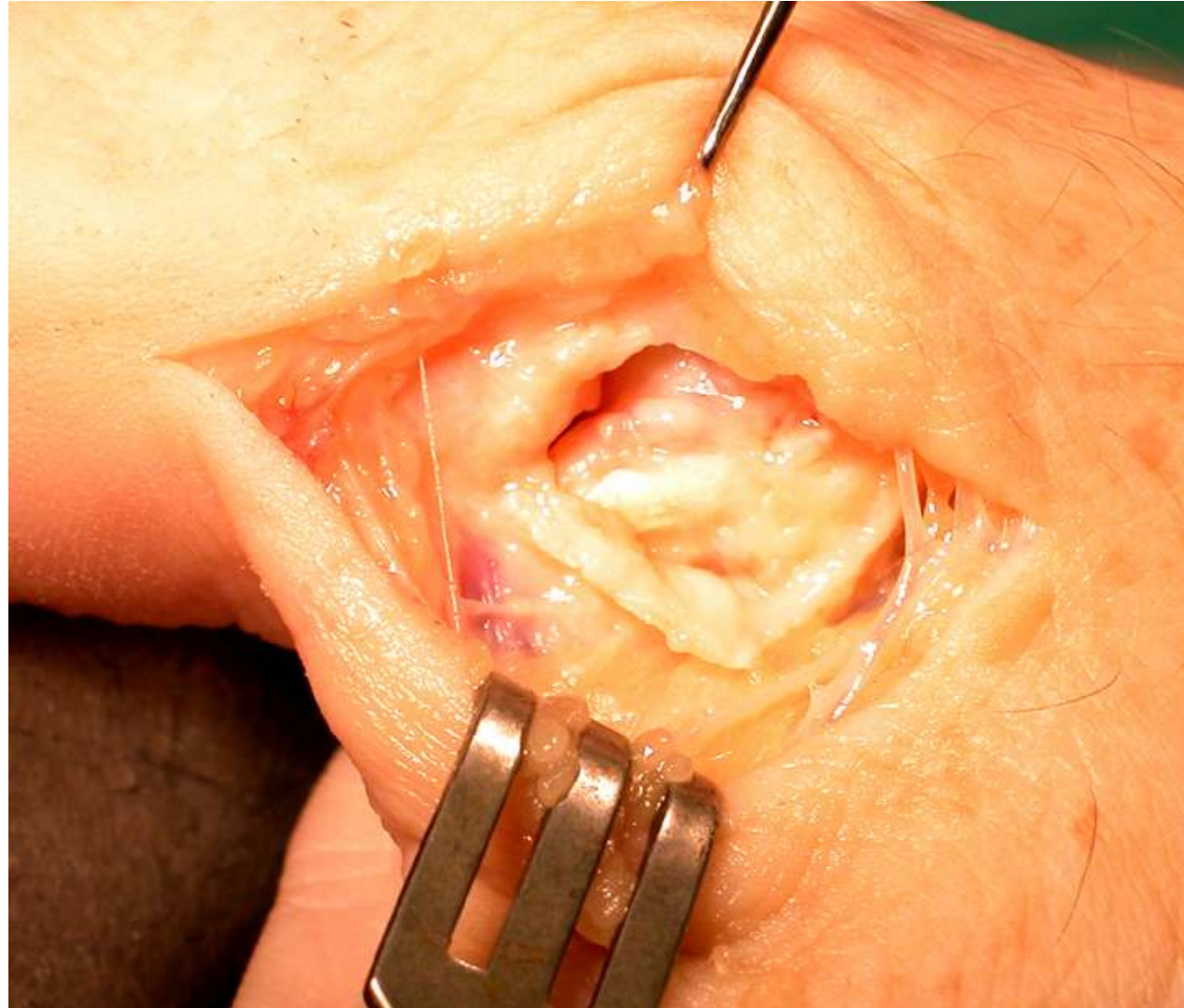
Division of AA



Exposed MCPJ

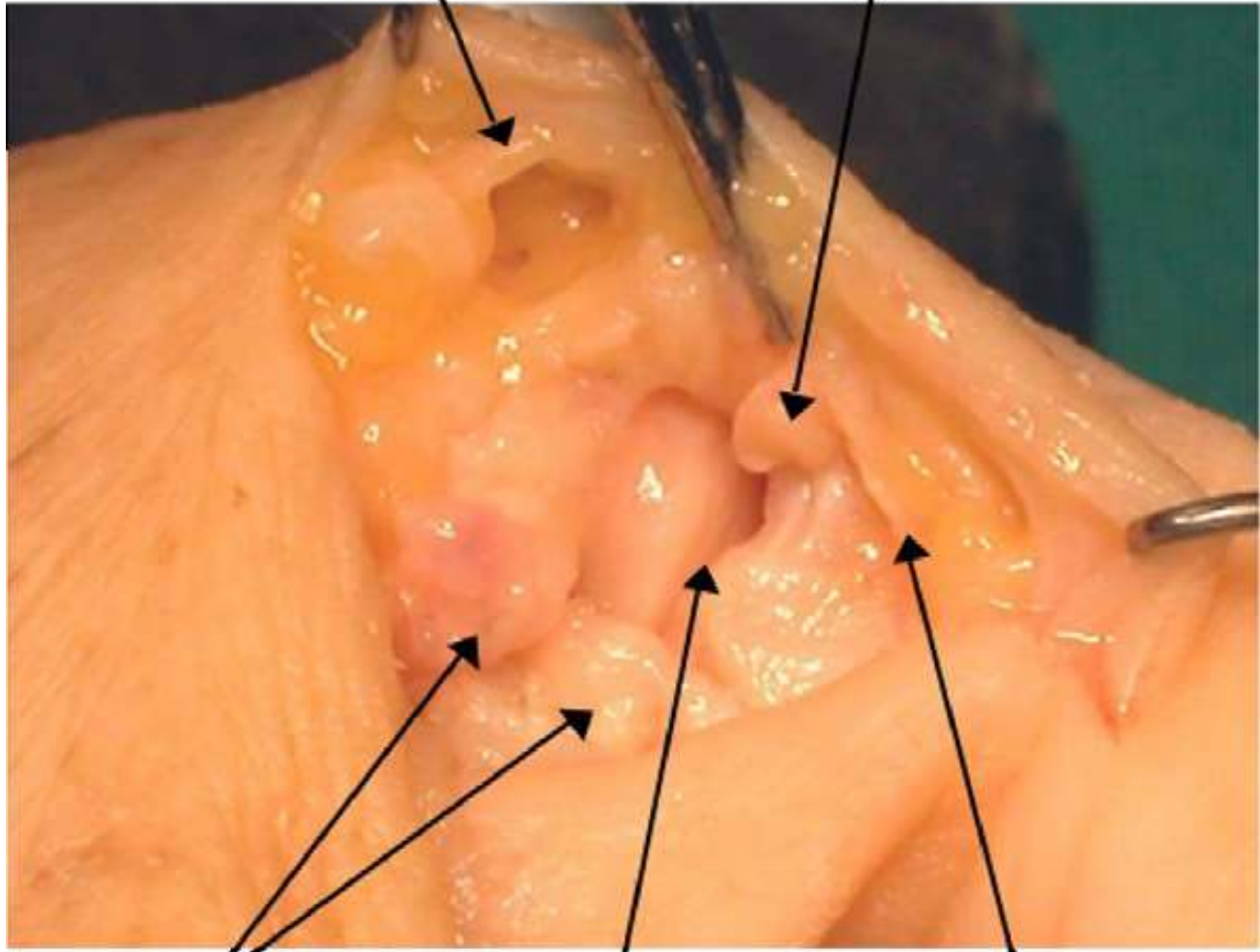


Dorsal Capsule Exposure



**DORSAL BRANCH
OF DIGITAL NERVE**

**DORSAL
CAPSULE TEAR**

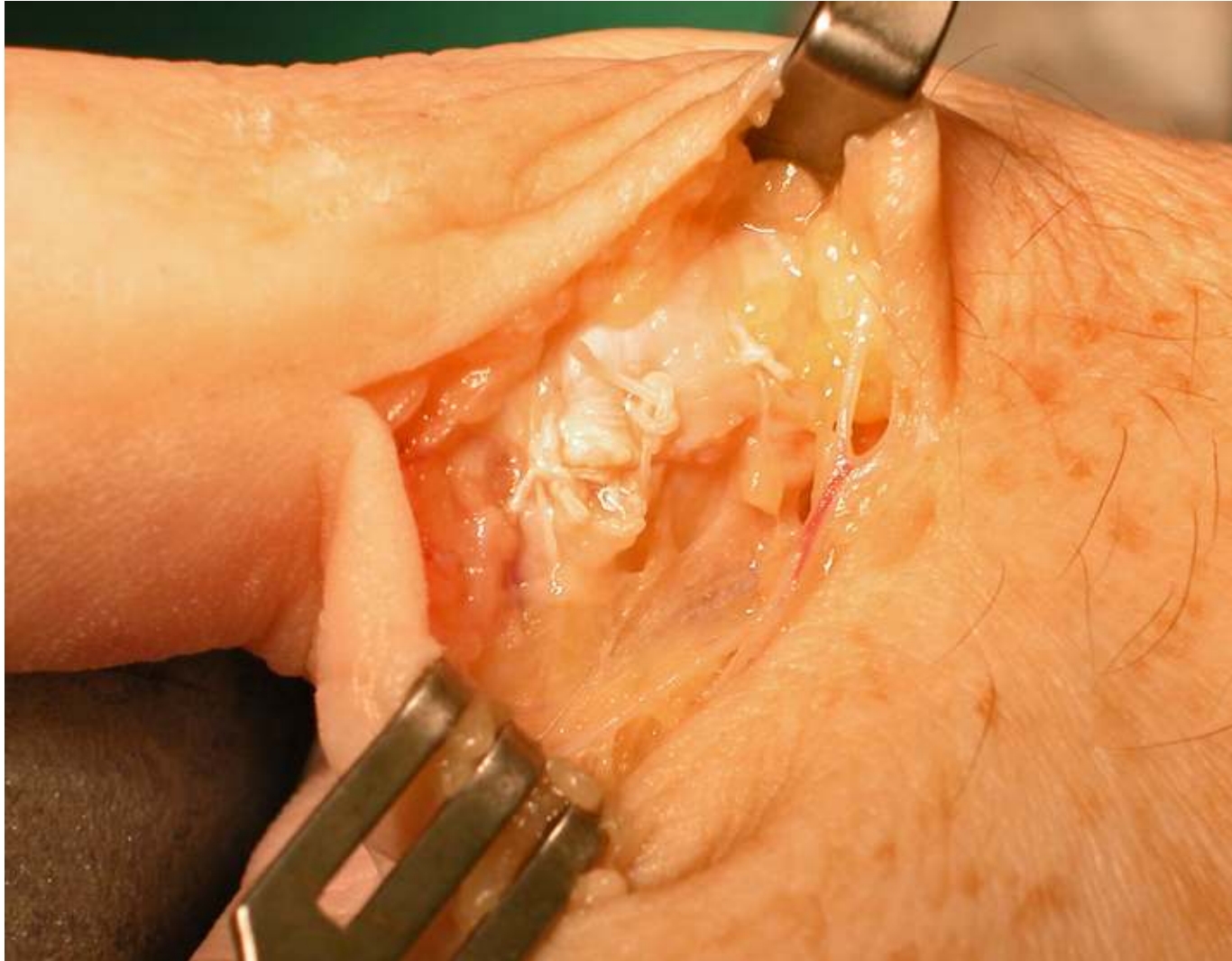


**UCL
TEAR**

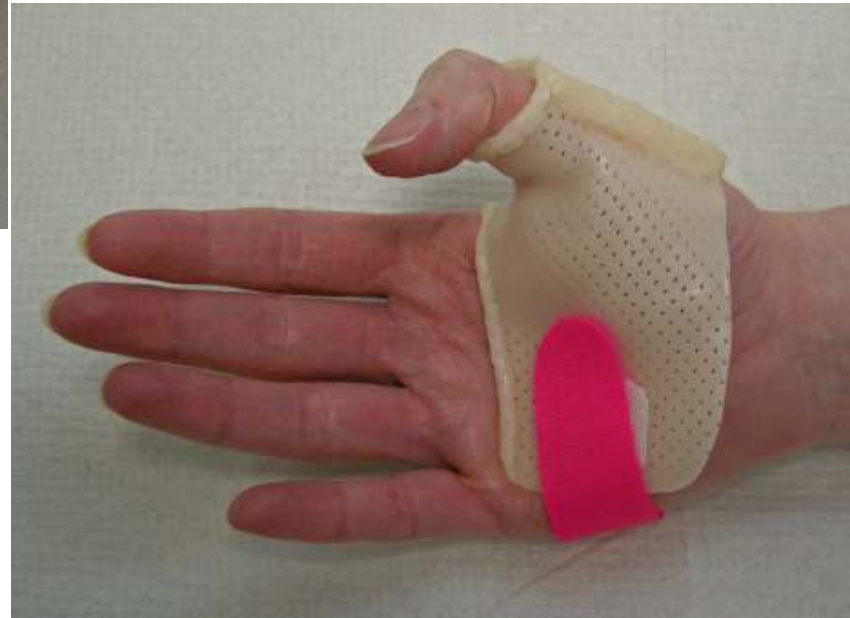
MCPJ

**ADDUCTOR
APONEUROSIS**

Repaired AP



Splintage



Sunderland Study

10 Year Experience

GC, CLM & LI

Injury 2009

Results

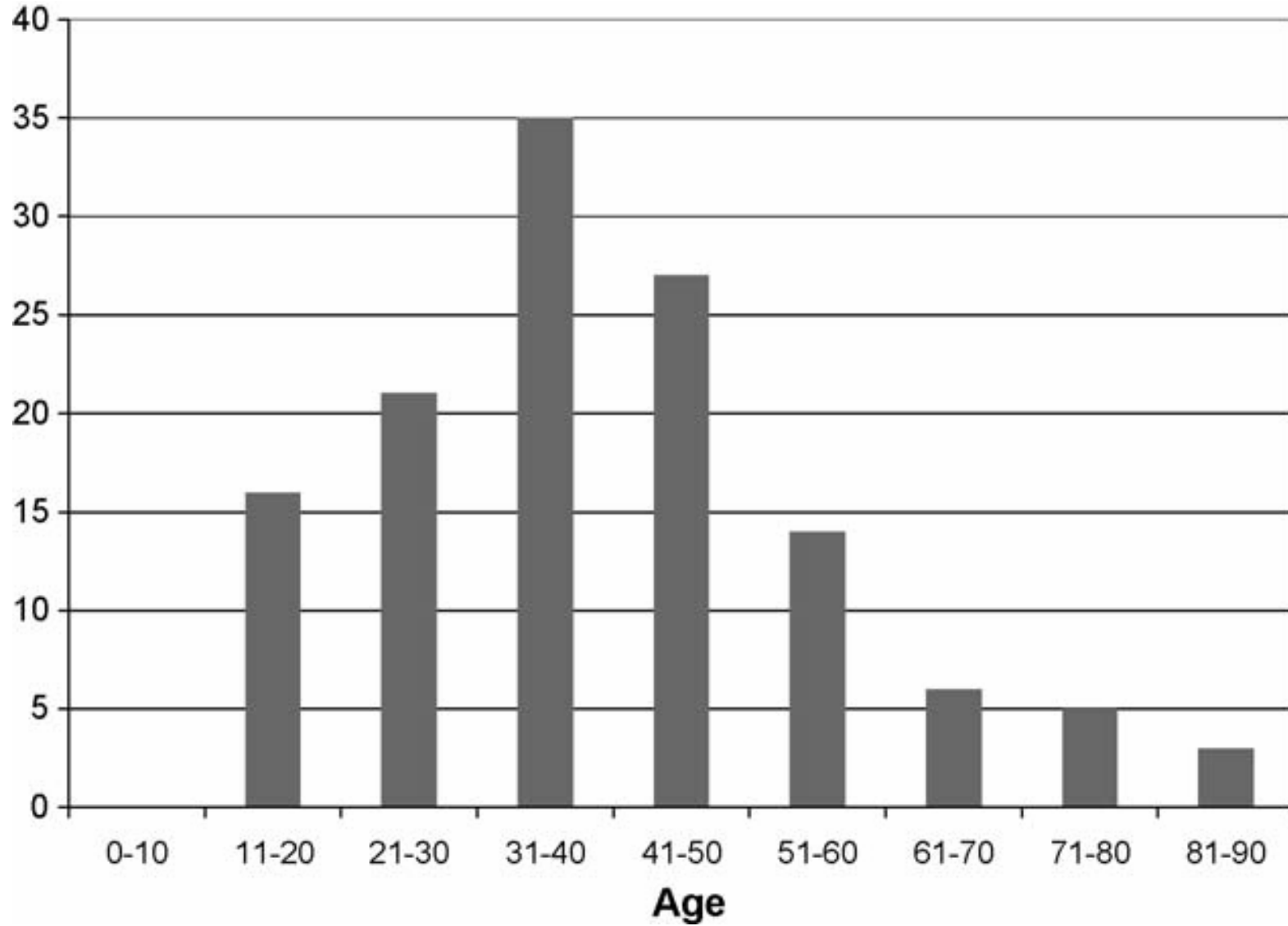
Demographic Data

- Age
- Sex
- Dominant Side
- Side Injured
- Cause of Injury
- Mechanism of Injury
- Place of Injury

Clinical Findings

- A&E
- UCL Clinic
- US Findings
- Operative Findings
- Post-operative Care
- Dorsal Capsular Injuries
- Surgical Techniques/Tips

Age Distribution



Causes

Causes	Percentage
Fall	49%
Trapped, Caught Thumb	12%
Sports	19%
Assaults	6.3%
Motor Bikes	5.5%
Cars	2.4%
Others	5.8%

Sports

Sport	Percentage
Football	7.7%
Cycling	3.3%
Skiing	3.2%
Rugby	1.6%
Boxing	1.6%
Cricket	1.6%

Role of US

- Advantages
 - None invasive
 - Sensitive
 - Specific
 - Dynamic
 - Pre-operative Planning
- Limitations
 - Operator Dependency
 - Timing/Delays
 - Dorsal capsular Tears



Role of US

- **Our Experience**
 - Useful Adjunct Pre-op
 - Screens Patients
 - Sensitive/specific
 - Timing is Crucial
 - Not sensitive for DC tears.
 - User dependency

Complications

- Overall (22/127) 17.7%
- Neurapraxia (8) 6.5%
- Stiffness (5) 4.0%
- Scar Pain (2) 1.6%
- Infection (Sup.) (1) 0.8%
- Others (6) 4.8%

Delayed UCL Rupture

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History

- 46 year old male
- Plasterer by trade
- Right hand dominant
- RTA, car hit in the rear
- Jarred R thumb on steering wheel
- Pain MCP joint, mainly ulnar side
- Thought will settle.
- No initial treatment

History

- Continued to work
- Unable to use right thumb
- Went to WIC
- Examined and X-rayed

X-rays



History

- Referred to UCL clinic
- Clinically UCL Rupture
- Positive “Muwanga-Jones” sign
- X-rays reviewed
- Thumb splint
- US arranged
- Surgery next hand trauma list

Subluxation MCP Joint



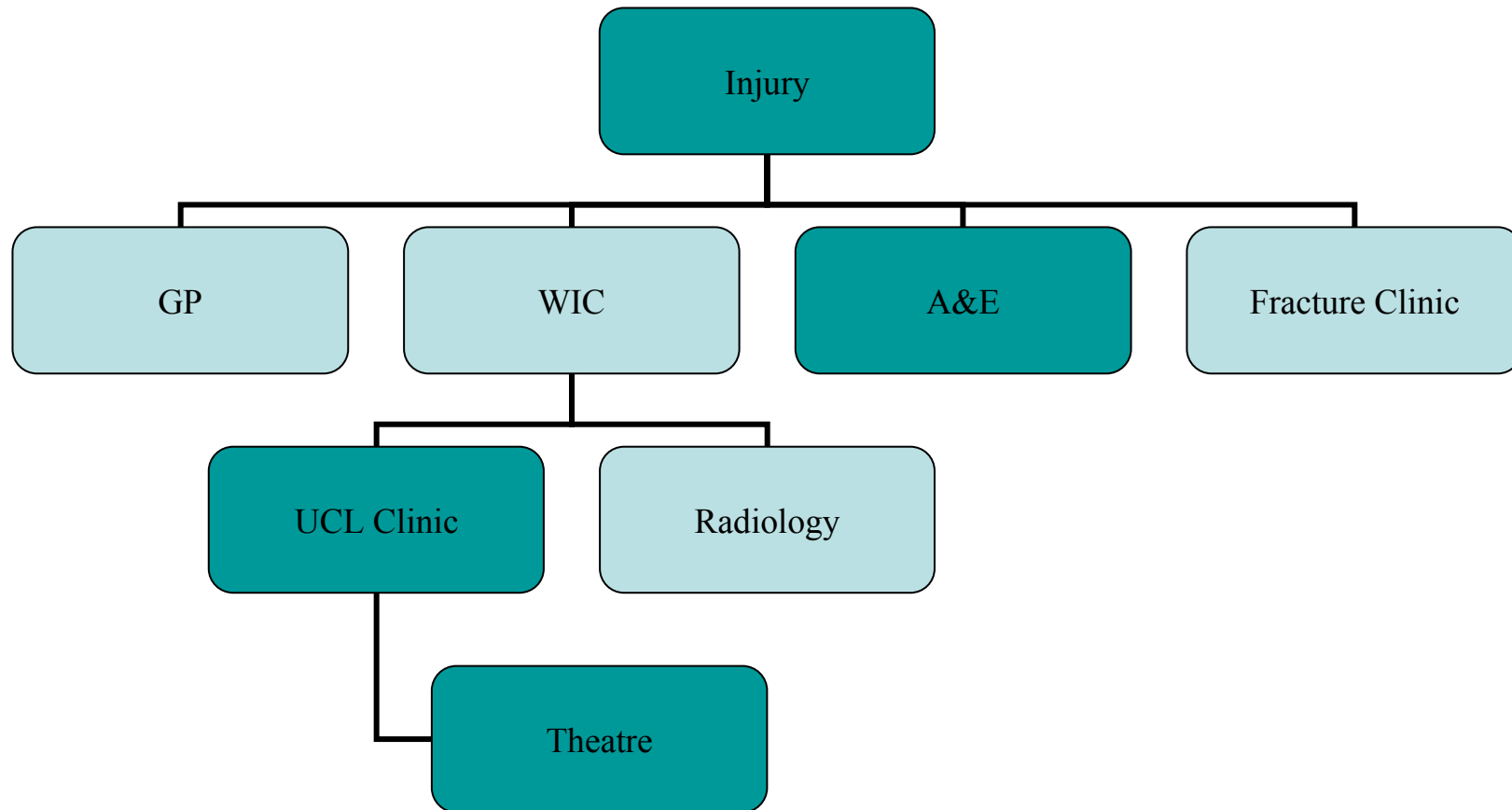
Management Plan

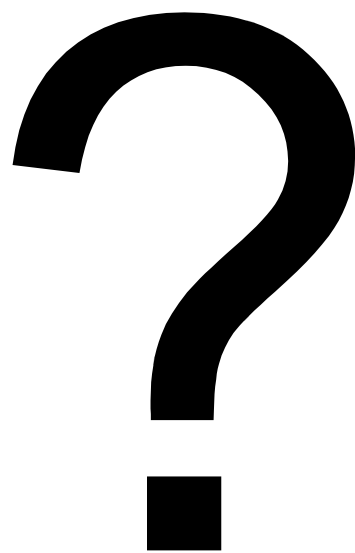
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The Sunderland System

- All A&E Staff Awareness
- Weekly
 - Open Access UCL Clinic.
 - Dedicated US Session
 - Hand Trauma List
 - Joint hand clinic
- Multi-speciality Input
 - A&E
 - Hand Surgeons
 - Radiologist
 - Hand Physiotherapy and Occupation Therapist.

Patient Journey

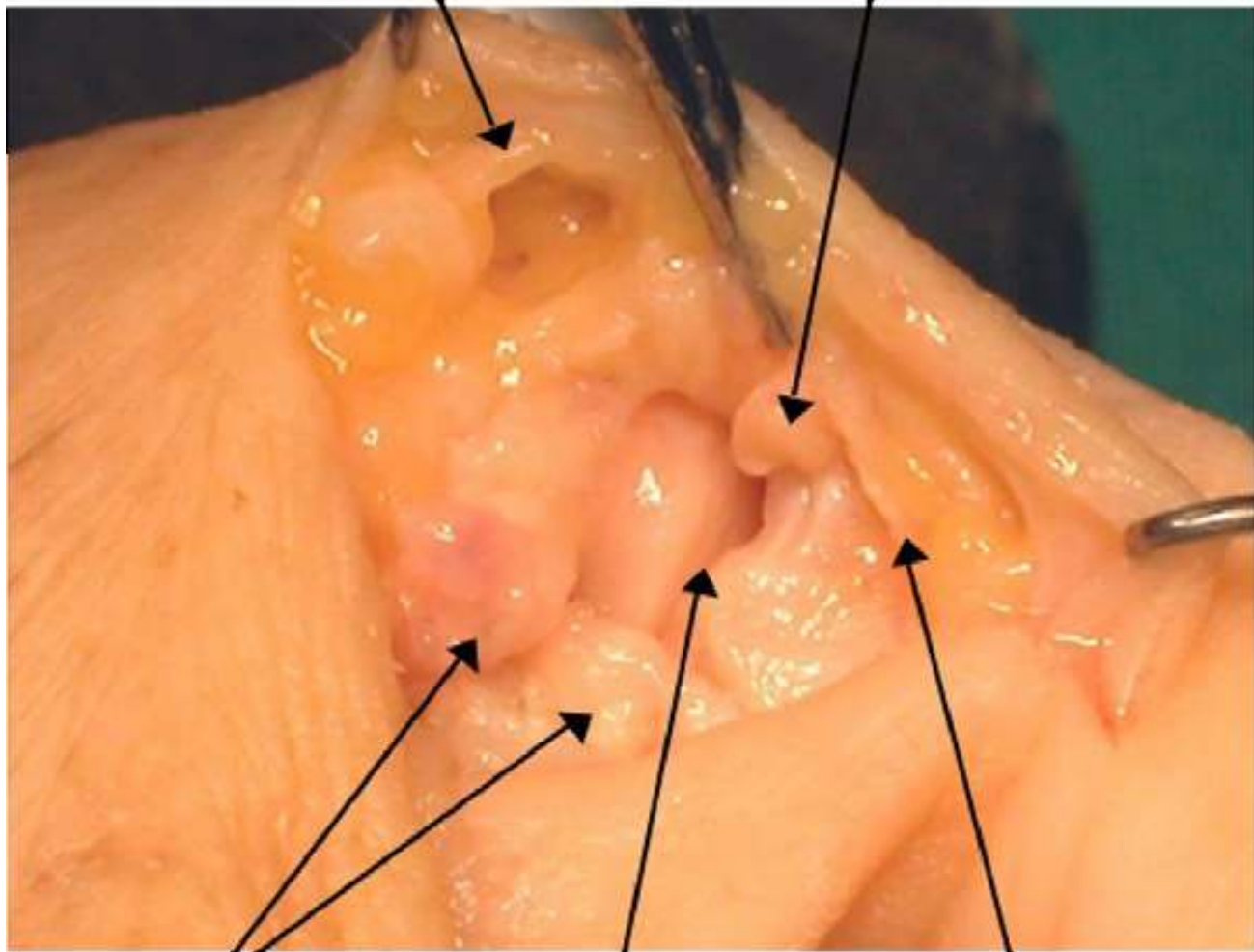




Summary

**DORSAL BRANCH
OF DIGITAL NERVE**

**DORSAL
CAPSULE TEAR**



**UCL
TEAR**

MCPJ

**ADDUCTOR
APONEUROSIS**

Well Used Splint

