



ULNAR COLLATERAL LIGAMENT AVULSION OF THE LEFT THUMB TREATED WITH SUTURE ANCHOR RECONSTRUCTION: A CASE REPORT

Orthopaedics

Dr. Etish Agarwal Senior Resident

Dr. CS Chaturvedi

Dr. Saloni Agarwal Resident

ABSTRACT

Ulnar collateral ligament (UCL) injuries of the thumb are common and can significantly impair hand function, particularly grip and pinch strength. Avulsion injuries, if untreated or chronic, may lead to instability and functional limitation. We report a case of a 61-year-old male presenting with left thumb pain and instability following trauma. Clinical examination and imaging confirmed UCL avulsion. The patient underwent surgical reconstruction of the UCL. Postoperatively, stability of the metacarpophalangeal joint was restored with good functional recovery and no complications, highlighting the effectiveness of surgical reconstruction in chronic or unstable UCL injuries in elderly patients.

KEYWORDS

Ulnar Collateral Ligament; Thumb Injury; UCL Avulsion; Thumb Instability; Ligament Reconstruction; Hand Surgery

INTRODUCTION

Injury to the ulnar collateral ligament (UCL) of the thumb, often referred to as "gamekeeper's thumb" or "skier's thumb," is a common condition resulting from valgus stress to the metacarpophalangeal (MCP) joint. These injuries can range from partial tears to complete ruptures or avulsion fractures.

If left untreated or inadequately managed, UCL injuries can result in chronic instability, weakness of pinch grip, and degenerative changes. Surgical intervention is indicated in cases of complete rupture, displaced avulsion, or failed conservative treatment. This report describes a case of UCL avulsion in an elderly patient managed successfully with ligament reconstruction.

Case Presentation

A 61-year-old male presented with pain, swelling, and instability of the left thumb following a history of trauma [twisting injury]. The patient complained of difficulty in gripping objects and performing daily activities.

On examination, there was tenderness over the ulnar aspect of the thumb MCP joint, with swelling and reduced pinch strength. Valgus stress testing revealed instability suggestive of UCL injury.

Radiographs of the left hand demonstrated an avulsion fragment at the base of the proximal phalanx of the thumb. Clinical and radiological findings confirmed the diagnosis of UCL avulsion injury.



Fig 1: Pre Op UCLAvulsion of Left Thumb

Surgical Technique

The patient was taken up for surgical reconstruction under regional or general anesthesia. A curvilinear incision was made over the ulnar aspect of the thumb MCP joint. The avulsed ligament and associated fragment were identified.

Depending on intraoperative findings, the ligament was reconstructed using insert method: suture anchor and k wire. The ligament was

reattached securely to its anatomical insertion. Stability was confirmed intraoperatively with valgus stress testing.

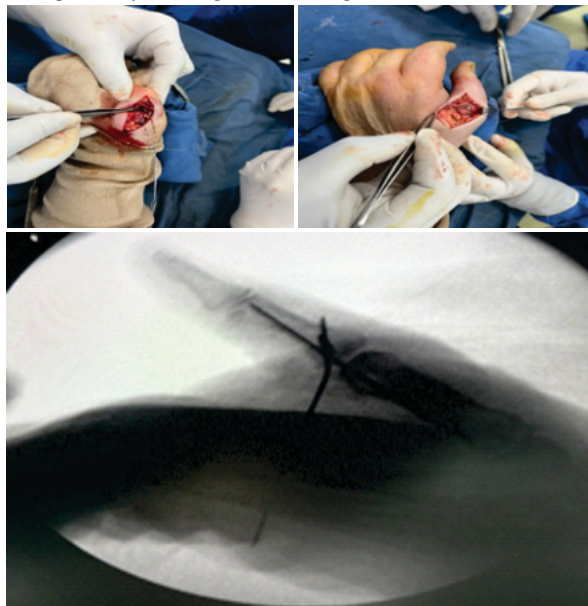


Fig 2. UCL Reconstruction Using Anchor Suture and K Wire.

The wound was closed in layers, and the thumb was immobilized in a thumb spica cast.

Postoperative Management:

Immobilization was maintained for approximately 4–6 weeks.

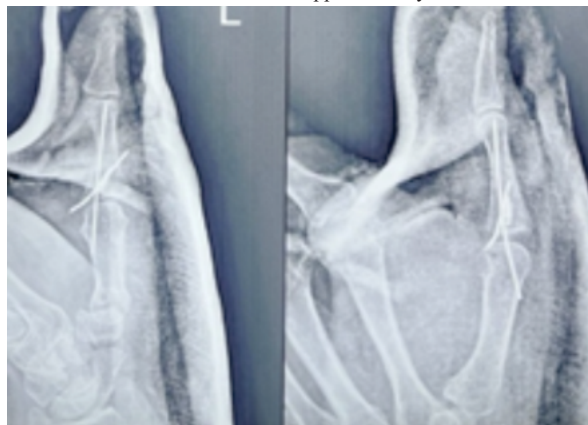


Fig 3 Post Op X Ray

After cast removal, gradual mobilization and physiotherapy were initiated to restore range of motion and strength.

Outcome and Follow-Up:

At follow-up of 6 months, the patient demonstrated good stability of the MCP joint with restoration of pinch strength. Pain had resolved, and functional use of the hand was significantly improved. No complications such as infection, stiffness, or recurrence of instability were noted.

DISCUSSION

UCL injuries of the thumb are clinically significant due to their impact on hand function. Avulsion injuries, particularly in older patients, may be associated with delayed presentation or poor healing potential.

Surgical reconstruction remains the gold standard for complete tears or unstable avulsion injuries. Techniques such as suture anchor repair or tendon graft reconstruction provide reliable stability. Early surgical intervention yields better outcomes, but even in delayed cases, reconstruction can restore function effectively.

In this case, surgical reconstruction provided excellent functional recovery, demonstrating that age alone should not be a contraindication for operative management.

CONCLUSION

UCL avulsion injuries of the thumb can lead to significant functional impairment if untreated. Surgical reconstruction is an effective treatment option in elderly patients, providing good joint stability and functional outcomes.

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