GAMEKEEPER'S THUMB [UCL RUPTURE]

Sports related injury: Skiers/Ball handling athletes rupturing Ulnar collateral ligament[UCL].

Clinical

History of injury

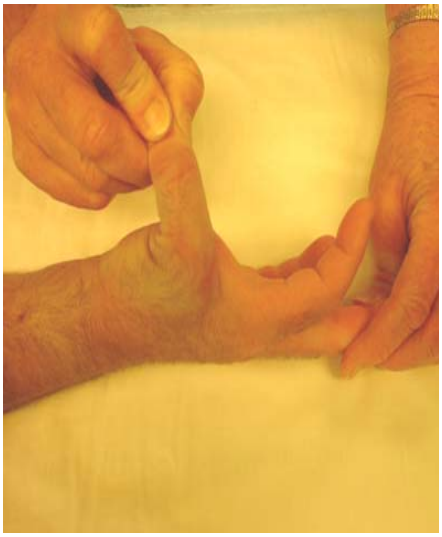
Bruising and swelling at medial side of MCP joint of the thumb

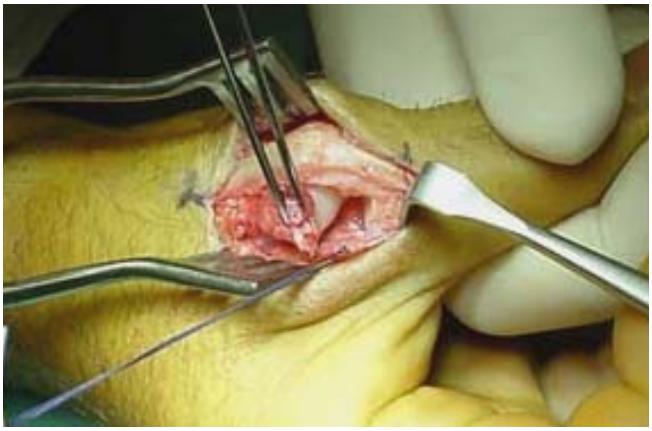
Stener lesion: UCL detached distally is retracted with interposition of Adductor aponeurosis between it and its attachment to the proximal phalanx.

Valgus test at 0º and 30 º of flexion at MPJ. Always compare with opposite. Recently it has been reported that even in normal population there may be 10º defference. Therefore stress X rays/MRI is indicated.

When laxity is present on stress test

At 0 º and 30 º	Both Accessory and proper collateral ligament are ruptured
At 30 º	Proper collateral ligament





Treatment

Partial tear	Thumb spica x 4wks
Complete tear	Always surgical repair

Technique

Oblique dorsal incision

Protect dorsal radial nerve

Identify Steners' lesion at the Proximal edge of the Adductor Aponeurosis

A longitudinal incision in the adductor aponeurosis paralleling the ulnar border of the EPL

Demonstrate the rupture and condition of the articular cartilage

Repair with pull out technique or bone anchoring stitch

If there is bone fragment - K wire

Chronic ligamentous lesion: Options

1. Repair scar tissue.
2. Transferring Adductor pollicis from the ulnar sesamoid to the base of Proximal phalanx
3. Palmaris longus tendon
4. MP fusion in case of OA arthritis

RADIAL COLLATERAL LIGAMENT

Radial collateral ligament (RCL) injuries of the thumb are relatively common although they are less common than ulnar collateral ligament injuries, which make up 10% to 42% of collateral ligament injuries of the thumb.

The RCL is especially important for pinch movements and for movements of depression. Complete disruption of the RCL can result in both static and dynamic instability, which can lead to a predictable sequence of a painful deformity resulting in articular degeneration.

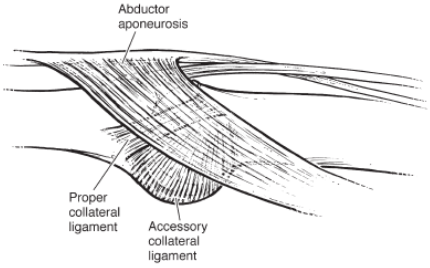


FIGURE 1: Anatomy of the RCL. Note that abductor aponeurosis lies over the RCL, precluding Stener lesion formation.

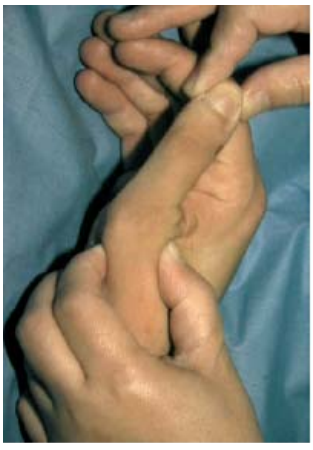
Most authors agree that both acute and chronic grade 3 RCL tears should be surgically treated. There are various methods of repair or reconstruction of the RCL that yield satisfactory results

Complete or incomplete

Equal incidence from the Metacarpal or base of PP

No Stener's lesion

Stress view



Treatment

Acute: Open repair Chronic: Scar repair or tendon graft

The skin incision for the RCL mirrors the incision used for the UCL.

The RCL can be approached through either a lazy S incision or a curved incision with the apex at the MCP joint over the radial side of the MCP joint. Skin flaps are elevated.

Superficial branches of the radial nerve must be protected

A longitudinal incision is made in the abductor aponeurosis volar to the

the RCL is examined. If the torn ligament is attenuated or fibrotic, or

it is shortened and cannot be advanced, then a reconstruction is performed.

For midsubstance tears, perform endto-end repair,[1] advancement of the

ligament to bone, or primary ligament reconstruction.

When the ligament is avulsed from its bony insertion or origin site, small

bone anchors can be used to reapproximate the ligament

The proper insertion point for the anchor is in the proximal phalanx on the palmar half of the lateral tubercle 3 mm to 5 mm from the articular surface

In the metacarpal head, the anchor should be placed 1 to 2 mm dorsal to the central axis of the lateral condyle

At this point, the MCP joint should be transfixed with a 1.4-mm (0.045-inch) Kwire.

One should suture the RCL back to its site of injury in at least 30° of flexion

After surgery, a short-arm thumb spica cast is placed for 6 weeks.

One third of cases, the RCL will be deficient, and a free tendon graft will be needed.

One should keep in mind 2 important notes especially in the chronic situation: (1) the joint surface should be inspected, and if a patient does have severe degenerative changes, MCP joint arthrodesis should be considered .