



Fig 2 Right subluxated EPL (black arrow) and EPB (white arrow) complex was identified (left) and was anchored to the insertion of APB with non-absorbable sutures (right).

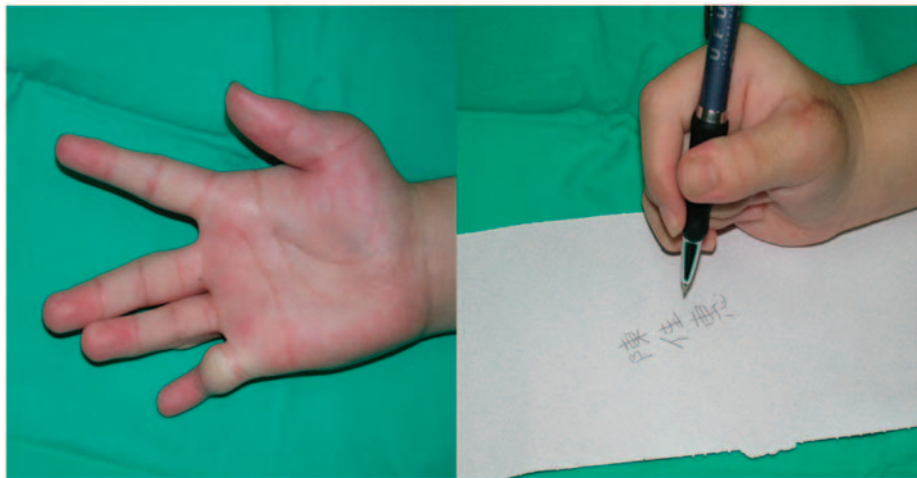


Fig 3 After reduction, corrected thumb could extend and abduct well at 4 weeks postoperatively (left). The patient could write her name well by grasping a pen in her right hand (right).

causes it to regain its correct tension and restores the balance between flexion and extension (Churchill and Citron, 1997).

References

- Churchill M, Citron N. Isolated subluxation of the extensor pollicis longus tendon. *J Hand Surg Br.* 1997, 22: 790–792.
- Lin SC, Huang HY, Lin CJ, Chiu HY. A simple splinting method for correction of supple congenital clasped thumbs in infants. *J Hand Surg Am.* 1999, 24: 612–614.
- White JW, Jensen WE. The infant's persistent thumb-clutched hand. *J Bone Joint Surg Am.* 1952, 34: 680–688.
- Young CM, Rayan GM. The sagittal band: anatomic and biomechanical study. *J Hand Surg Am.* 2000, 25: 1107–1113.

Chun-Chia Chen Chief Resident, Shyh-Jou Shieh, MD, PhD, Associate Professor/Attending Surgeon and Haw-Yen Chiu, Professor, Attending Surgeon

*Division of Plastic Surgery, Department of Surgery, and
Institute of Clinical Medicine, National Chung-Kung
University Medical Center, Tainan, Taiwan
E-mail: hychiu@mail.ncku.edu.tw*

© 2009 The British Society for Surgery of the Hand. Published by SAGE. All rights reserved.
doi: 10.1177/1753193408094154 available online at <http://jhs.sagepub.com>

Re: “Stener-like” lesion in the little finger

Dear Sir,

Stener lesions (interposition of the adductor pollicis aponeurosis between the two ends of the ruptured ulnar collateral ligament) have been reported to be present in

up to 29% of injuries (Spaeth et al., 1993) and in 50% of complete ruptures of the ulnar collateral ligament of the thumb metacarpophalangeal joint (MCPJ) (Richard, 1996). We encountered a similar “Stener-like” lesion involving the radial collateral ligament of the little finger MCPJ.

A 47 year-old male plumber presented to our clinic 4 weeks after striking the dorsum of his non-dominant left hand on a ladder during a fall at work. He complained of a tender mass on the dorsum of his left hand that had been present since the injury. Physical examination revealed a tender mass between the ring and little metacarpal heads and increased pain with resisted adduction of the little finger. Radiographs revealed no fractures. Our initial diagnosis was a palmar interosseous strain with an organising haematoma. The patient was advised to buddy tape his left ring and little fingers daily and return to clinic in 1 month.

One month later, the patient reported no relief of his symptoms. The mass was still present, and moved with flexion and extension of the little finger MCPJ. MRI of the hand was performed, and suggested a distal rupture of the radial collateral ligament of the little finger MCPJ with displacement of the ligament dorsal and superficial to the proximal edge of the radial sagittal band and extensor hood (Fig 1). It also revealed a partial tear/strain of the radial aspect of the palmar interosseous muscle. Surgery was planned to repair the radial collateral ligament of the little finger MCPJ.

At surgery, it was found that the radial collateral ligament of the little finger MCPJ had been avulsed from the base of the proximal phalanx and had retracted to a position dorsal to the proximal edge of the sagittal band, in a similar manner to a Stener lesion (Fig 2). The sagittal band was divided longitudinally, and the avulsed ligament was relocated deep to the extensor hood and reattached to the base of the proximal phalanx.

After surgery, the left little and long fingers were buddy taped, and physical therapy for strengthening and range of movement was commenced at 2 weeks. The patient had a full range of motion and a stable MCPJ at 6 weeks follow-up.

Stener lesions lead to chronic instability of the thumb MCPJ because the adductor aponeurosis is interposed between the ends of the ruptured ulnar collateral ligament, thereby preventing spontaneous healing (Stener, 1963). This unique anatomical arrangement makes surgical intervention mandatory. The case described here is no exception to this principle, as the free distal end of the ruptured radial collateral ligament of the little finger MCPJ was lying superficial to the proximal edge of the radial sagittal band. This was evident on a pre-operative MRI and was subsequently confirmed at surgery. At surgery, it was possible to successfully relocate the ruptured ligament to its anatomic position, deep to the extensor mechanism, such that the structure could heal and regain its function.

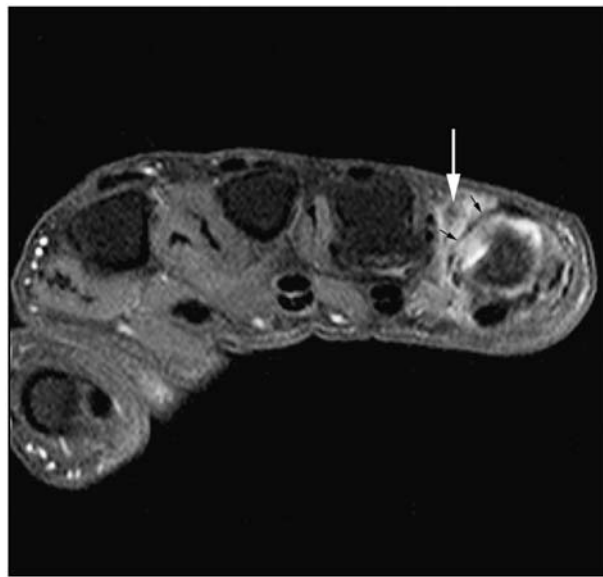


Fig 1 Axial T1 MRI with contrast showing radial collateral ligament (white arrow) superficial to the radial sagittal band (black arrows).

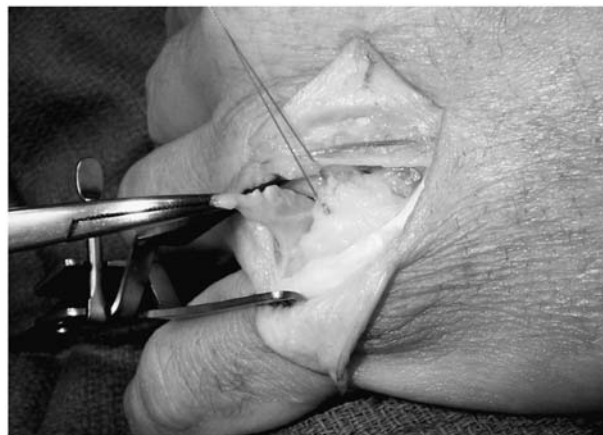


Fig 2 Intraoperative photograph revealing the proximal portion of the ruptured radial collateral ligament (identified by suture) of the little finger MCPJ proximal to the longitudinally divided and retracted the sagittal band (held by clamp) prior to repair.

We have found no similar reports in the English literature, but an abstract in French has described an identical lesion (Faivre et al., 2002). It is our belief that the cause of this lesion is a hyperabduction force at the MCPJ of the little finger. The initial force causes a rupture of the distal attachment of the ligament, and the continued abduction results in the proximal edge of the sagittal band moving distally with respect to the MCPJ, such that the free end of the ruptured ligament lies proximal to its free edge. When the abduction force ceases, the joint relocates, and when doing so, the free

end of the ligament remains superficial to the proximal edge of the sagittal band.

The most difficult aspect of this case was the diagnosis. The initial clinical diagnosis was thought to be a muscle strain with an organising haematoma. It was only after symptoms persisted despite adequate splinting that an MRI was obtained, which made the diagnosis clear. Based on this experience, we feel that tender web space masses should initially be managed conservatively (if radiographs are negative), but an MRI should be performed if the painful mass persists.

References

- Faivre S, Bellumore Y, Mansat P, Dautel G, Merle M, Mansat M. Rupture of the radial collateral ligament of the fifth metacarpophalangeal joint. A case report with Stener effect. *Chir Main*. 2002, 21: 198–201 (in French).
- Richard JR. Gamekeeper's thumb: ulnar collateral ligament injury. *Am Fam Physician*. 1996, 53: 1775–81.
- Spaeth HJ, Abrams RA, Bock GW, Trudell D, Hodler J, Botte MJ, Petersen M, Resnick D. Gamekeeper's thumb: differentiation of nondisplaced and displaced tears of the ulnar collateral ligament with MR imaging. Work in progress. *Radiology*, 1993, 188: 553–6.
- Stener B. Skeletal injuries associated with rupture of the ulnar collateral ligament of the metacarpophalangeal joint of the thumb. A clinical and anatomical study. *Acta Chir Scand*. 1963, 125: 583–6.

Michael J. Coffey, MD, Michael E. Stadnick, MD and
Sunil M. Thirkannad, MD
*Christine M. Kleinert Institute for Hand and
Microsurgery, 225 Abraham Flexner Way, Suite 850,
Louisville, KY 40202, USA and Radsourc, Inc.,
Brentwood, TN, USA*
E-mail: sthirkannad@cmki.org

© 2009 The British Society for Surgery of the Hand. Published by SAGE. All rights reserved.
doi: 10.1177/1753193408093562 available online at <http://jhs.sagepub.com>

Re: Scaphoid fracture in bilateral congenital synostosis of the scaphoid and trapezium

Dear Sir,

A 15 year-old right-handed girl of Afro-Caribbean origin presented with pain in the right wrist after sustaining a fall onto the outstretched hand in the school playground. Initial examination of the wrist showed tenderness in the anatomical snuff-box with restricted range of motion at the wrist. Examination of the contralateral wrist demonstrated a full range of motion. Radiographic examination of both hands confirmed a fracture through the waist of the right scaphoid and bilateral synostosis of the scaphoid and trapezium (Fig 1). She was treated by percutaneous fixation of the scaphoid fracture via a dorsal approach using a headless, self-tapping, variable-pitch compression screw. At the



Fig 1 Scaphoid fracture of the right wrist with scaphotrapezial synostosis.

follow-up 8 weeks after the operation, she had no pain on palpation of the fracture site and range of movement was equal to the contralateral side. Bilateral foot radiographs were obtained and showed no evidence of tarsal coalitions. At 8 months follow-up, she was asymptomatic and a repeat CT scan showed union at the fracture site (Fig 2).

Carpal synostosis or synchondrosis results from incomplete cavitation of a common cartilaginous precursor during the 4th to 8th weeks of intrauterine life (O'Rahilly, 1953). Almost every possible combination of congenital carpal synostosis has been reported. The commonest combination is synostosis between the lunate and triquetrum, followed by fusion between the capitate and hamate (O'Rahilly, 1953). It can occur as part of a syndrome of multiple congenital anomalies or as an isolated entity. Syndromic carpal synostoses tend to involve more than two bones and cross the proximal and distal carpal rows. In contrast, isolated synostoses tend to involve only two bones and occur in the same carpal row (Weinzeig et al., 1997).

Scaphotrapezial synostoses are rare and most occur in patients with multiple anomalies or as part of a hereditary syndrome. Zielenski and Gunther (1981) and Barnes et al. (1992) have previously reported cases of scaphotrapezial synostosis; however, in neither report was there a concomitant scaphoid fracture.

References

- Barnes CL, Frazier GT, Hixson ML. Bilateral congenital fusion of the scaphoid and trapezium in identical twins. *Orthopedics*. 1992, 15: 739–741.
- O'Rahilly R. A survey of carpal and tarsal anomalies. *J Bone Joint Surg Am*. 1953, 35: 626–642.
- Weinzeig J, Providence RI, Kirk Watson H et al. Congenital synchondrosis of the scaphotrapezio-trapezoidal joint. *J Hand Surg Am*. 1997, 22: 74–77.
- Zielenski CJ, Gunther SF. Congenital fusion of the scaphoid and trapezium – case report. *J Hand Surg Am*. 1981, 6: 220–222.