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Finger constriction by a brass threading die

Dear Sir,

A 22 year-old man presented with a devascularised index finger, which was stuck in a brass threading die (Fig 1). The first impulse of the attending team was to cut through the device to release the finger. However, this was impractical, given the thickness and resilience of the material. A clearer history was taken from the patient and a company representative, giving a better understanding of the device, and an alternative means of removal suggested itself. The device was used to cut threads into screws (Fig 2), so it was possible to unscrew the device gently from the finger under general anaesthesia without further injury to the digit. The finger circulation was still tenuous after removal (Fig 3) but improved after microsurgical repair of the transected digital artery.



Fig 1 The index finger firmly wedged in the brass threading die.



Fig. 2 A view of the device showing the threads for cutting screws.



Fig. 3 The devascularised finger still showing the thread imprint after removal of the threading die.

Finger constriction caused by ring jewellery is a common problem. Strangulation of digits by more unusual devices is rare. Green et al. (1975) reported a hand caught in the worm in a meat grinder. We describe a case of finger strangulation involving an unusual device. Cutting the device was impractical and a different approach based on a clearer understanding of the device allowed its removal quickly and atraumatically.

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Re: Scapholunate interosseous ligament rupture in an elite rock climber

Dear Sir,

A 41 year-old right-hand dominant man presented with a 1-month history of pain in his right wrist after training for rock climbing. He had climbed for 11 years, and had gained the 8+ level of the International Union of Mountaineering Associations (11+ is the top level). During training, he performed the “bouldering technique” (climbing over large rocks). He used the “open grip” position with the right wrist placed in 20° flexion and moderate ulnar deviation, and the metacarpophalangeal and proximal and distal interphalangeal joints in slight flexion. When extending his wrist under considerable stress, he had heard a “clunk” and had developed severe dorsal wrist pain.

On examination, there was localised tenderness in the periscapholunate area and pain on provocative wrist ligament testing. Kirk–Watson’s test was positive. Standard X-ray showed a normal wrist, and stress views were not obtained. Computed tomography and arthrography confirmed a scapholunate interosseous ligament (SLIL) tear (Photo 1).

At surgery, we found a complete rupture of the SLIL, which we repaired and temporarily stabilised with two K-wires for 2 months.

Fourteen months after surgery, he complained of no pain, had a stable wrist and a negative Kirk–Watson’s test. The range of the motion was normal and grip strength was 80% of the contralateral hand. The patient had resumed sport without pain.

Many types of hand and wrist injuries occur in rock climbers, and soft tissues are injured most frequently (Shea et al., 1992). The typical lesion in this sport is the closed A2 pulley rupture, and this is present in 27% of competitive climbers (Bollen and Gunson, 1990). Wrist ligament injuries are less frequent, occurring in less than 5% of climbers (Logan et al., 2004; Holtzhausen and Noakes, 1996).

Scapholunate instability is usually caused by a fall on an extended wrist, ulnar deviation and intracarpal supination stress. It can also result from repeated minor injuries (Lewis and Osterman, 2001). In wrist extension, the palmar midcarpal ligament exerts an extension moment on the distal scaphoid. This extension force is transferred to the lunate through the SLIL. The lunate resists the extension through the radiolunate ligament and the lunotriquetral ligament causing extreme force



Photo 1 Computed tomography arthrogram of the wrist. (a) Coronal CT scans show the passage of contrast liquid between the scaphoid and lunate bones, from the midcarpal to the radiocarpal joint. (b) Axial CT scans show the rupture of the posterior and central aspect of the SLIL.

within, and rupture of, the SLIL (Weaver et al., 1994). In our case we think that repetitive stress injuries and the great tension produced in the SLIL by flexion–extension movements of the wrist in ulnar deviation during the climbing caused the SLIL rupture. We have been unable to find any previous report of the SLIL tears in climbers.

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