

all reported a return to normal activity in that there were no tasks in the post-rehabilitation period that patients could not perform as compared with the pre-injury period. Furthermore, all 24 employed patients had returned to their original work. Only three patients reported episodic mild and improving joint tenderness with heavy use. No further complications, symptoms, or issues were reported, either during hand therapy follow-up or at telephone contacting.

Reducing and maintaining closed reduction of phalangeal fractures can be quite difficult, especially while avoiding irradiation of the surgeon's own hand or avoiding damaging the skin and other soft tissues with sharp clamps. ECGR preserves sufficient space for efficient and unencumbered K-wire placement. Nonetheless care must be taken to ensure that K-wires are not driven through the glove material, which could potentially introduce foreign material into the digit. The ECGR technique has been found to be extremely useful in assisting more accurate and efficient closed reduction and percutaneous K-wire fixation of phalangeal hand fractures.

Declaration of interest

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A method of stabilization of the fingers for intraoperative lateral radiographs

Dear Sir,

Bhat and Mather (2010) and Rust and ter Linden (2012) have described methods for holding the fingers in a particular position to obtain radiographs during surgery, using adhesive tape that is wrapped around the injured finger. The surgeon's hand keeps tension on the tape during the imaging. The disadvantage of these methods is that the surgeon must stay close to the C-arm and the X-ray beam. We offer a simple and safe option to hold the patient's finger in the correct position to obtain a lateral radiographic image. With this technique, the operating room staff members do not need to be close to the patient or the X-ray machine during examination, thus minimizing radiation exposure to personnel.

The plunger from disposable syringe (10 ml or 20 ml) is used as the 'holder' for the finger. The plunger from a 5 ml syringe is suitable for small hands. The rubber part of the plunger should be removed because it is radiodense. The patient's forearm and hand are held in the mid-position between supination and pronation. The target finger is slightly extended so that its silhouette is not superimposed on the adjacent fingers, and held in this position with the help of the improvised holder. The prepared plunger is placed close to the base of the target finger (Figure 1(a)). The flat surface of the plunger faces the table because this position is more stable. This simple device holds the target finger in a position of slight flexion and the adjacent fingers more flexed. It allows imaging with no risk of the superimposition of the neighbouring fingers over the target finger (Figure 1(b)).

The holder is not stable enough for radiographs of the index and small fingers. In such cases, we use a plunger held in place by means of a rubber ring made from a surgical glove (Figure 2). The rubber ring fixes the plunger to the index finger (to examine the small finger) or to the small finger (to examine the index finger).

Declaration of conflicting interests

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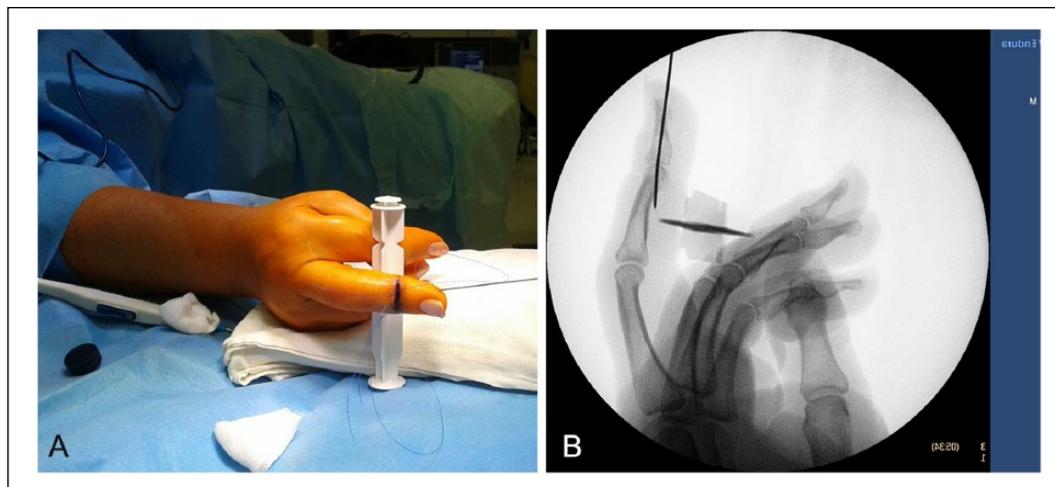


Figure 1. (A) The position of the middle finger for radiography after tenodesis and stabilization of the distal interphalangeal joint with a Kirschner wire for the treatment of a neglected mallet finger injury. (B) Intraoperative radiograph of the middle finger.

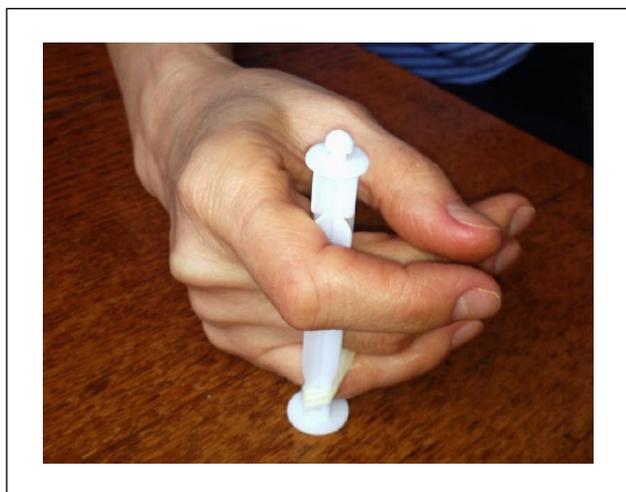


Figure 2. The index finger's position for the X-ray examination. The rubber ring from the surgical glove fixes the plunger to the small finger.

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Intraosseous suture fixation of a sagittal fracture of the distal phalanx

Dear Sir,

A boy aged 2 years and 6 months crushed his thumb with a bowling ball. The nail plate was traumatically elevated revealing a stellate nail bed injury and underlying open fracture. Radiographs demonstrated a longitudinal mid-sagittal split of the distal phalanx from the distal tip, extending proximally into the physis (Figure 1). Surgery was carried out under general anaesthesia and with an arm tourniquet. The open fracture was debrided. The nail bed would not approximate without reduction of the underlying fracture. Both halves of the distal tuft were delivered into the wound. A 4-0 PDS® (polydioxanone) suture (Ethicon, Somerville, NJ, USA) on a cutting needle was passed transversely through the two halves of the distal phalanx and tied with an anterior knot. Excellent fracture compression was achieved clinically and radiographically (Figure 2). Reduction of the bone permitted the nail bed to be repaired with a rapidly absorbing suture. The nail plate was replaced with a figure of eight tie-over suture. Wound review at 48 hours was satisfactory. The patient made a full functional and cosmetic recovery by 7 weeks, although the nail had not fully regrown. Radiographs demonstrated that the fracture was uniting.

Distal phalangeal fractures with an overlying nail bed injury and displacement of the nail plate are open fractures and require washout. Most can be stabilized by replacing the nail plate plus simple