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Letter to the Editor

Ultrasound-guided transversus abdominis plane (TAP) block in pedicled groin flap

Pedicled groin flap (PGF) is a superficial flap commonly used for covering wound defects in emergency hand surgery. PGF is a vascularised axial flap supplied by the superficial circumflex iliac artery, which arises from the femoral artery just below the inguinal ligament. Design of the flap is an ellipse whose longitudinal axis is the superficial circumflex iliac artery. The superior and inferior borders of the flap are parallel to the inguinal ligament. Flap dissection starts at the lateral border without muscular and fascia dissection. Then, the lateral border of the aponeurosis of sartorius is incised and included into flap dissection in order to preserve the vessel. The donor site is closed and finally the flap is inserted [1,2].

Acute postoperative pain and nerve injury during this procedure (lateral cutaneous nerve of the thigh) can lead to chronic neuropathic pain, with an incidence of 41% [3]. Consequently, optimisation of postoperative analgesia is paramount.

The skin and the subcutaneous tissue involved in the PGF are innervated by the intercostal nerves T11 and T12, and by the iliohypo-gastric nerve L1. With a single injection, the transversus abdominis plane (TAP) block permits a sensory block of T9-T12, and L1 within the plane between the transverse abdominal and the internal oblique abdominal muscles [4].

We present the case of an 8-year-old Afghan boy who was struck by a car and brought to the Kabul Airport Military Hospital for medical treatment. A full-thickness skin loss of the dorsal aspect of his right hand was noted. The initial management consisted of debridement of the wound. After 10 days, it was decided that a PGF was necessary (Fig. 1).

Anaesthesia was induced with propofol and sufentanil, and maintained using sevoflurane. Before surgical incision, a TAP block was performed under ultrasound guidance with a 50-mm, 22-gauge needle. The puncture was performed in-plane. After needle-tip placement, 12 mL of ropivacaine 3,75 mg.mL^{-1} was injected. During surgery, supplementary injection of sufentanil was minimal. Postoperatively, he received intravenous paracetamol 15 mg.kg^{-1} every 8 hours. Pain severity was minimal during the first 24 hours, with no morphine requirement. Three weeks postoperatively the pedicle was cut and the outcome was favourable without chronic pain.

In conclusion, the reducing postoperative pain in children is relevant. TAP block allows good analgesia after PGF and is probably useful in minimising the discomfort of postoperative immobilisation.

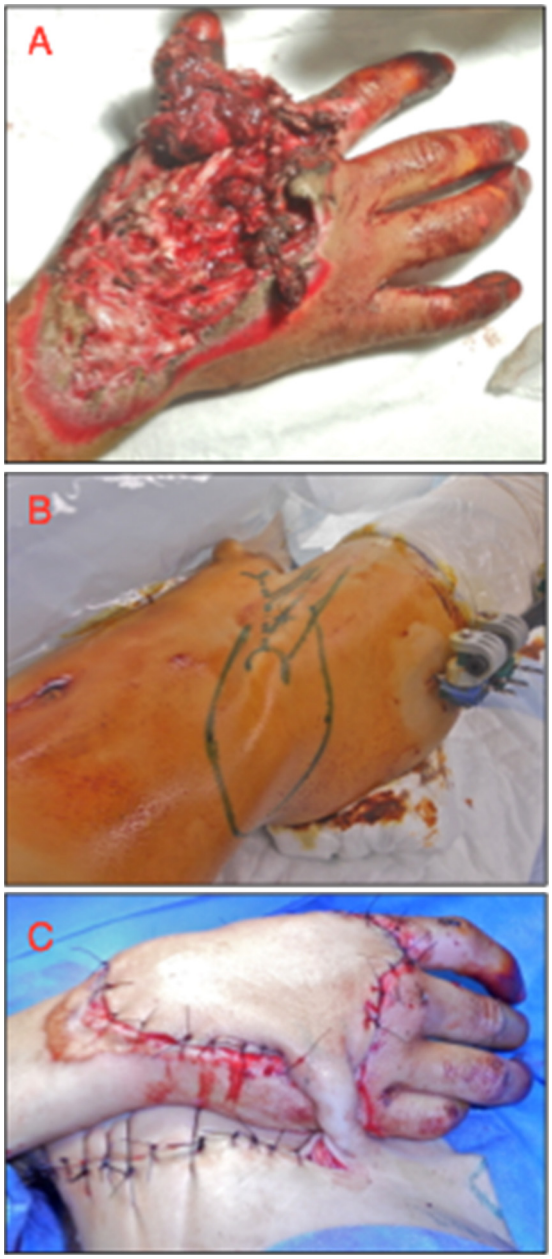

Fig. 1. A. Dorsal aspect of degloved right hand before surgery. B. Preoperative markings showing the inguinal ligament. C. Pedicled groin flap raised at the inguinal ligament.

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Disclosure of interest

The authors declare that they have no competing interest.

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