benefit compared with other routes of administration (transmucosal or transnasal) due to better compliance in those not responding to conventional treatment modalities of PDPH. We have used dexmedetomidine nebulization with good results and the exact site and mechanism of action needs to be studied.

Declaration of interests

Nil.

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Distractions during the critical phases of epidural placement

It has been well documented that interruptions at critical times of a procedure can affect performance. In the aviation industry a "sterile cockpit" rule was introduced as interruptions during critical phases accounted for 7% of aviation incidents.[1] This rule prohibits conversation unrelated to the task in hand at certain critical phases. This concept, and its application to anaesthesia, has been studied and examines disturbances occurring during induction, maintenance and emergence from anaesthesia.[1]

We conducted a pilot study to quantify the number and nature of disturbances occurring during the critical phases of epidural placement on the labour ward. A total of 92 epidural catheter placements over a three-week period were analysed. Data were collected by means of a questionnaire filled out by the training registrar following completion of the epidural. Data were recorded on a standardised form and included any disturbances that occurred during the critical phases of epidural placement. The "critical phase" was defined as the time from positioning the patient to administration of a test dose. Disturbances to epidural placement that were deemed necessary included emergency caesarean section, antepartum or postpartum haemorrhage; or an emergency that required the procedure to be abandoned. Excluding these "necessary disturbances" a total of 107 disturbances were recorded, with 63% of epidurals experiencing at least one disturbance. The most frequent disturbances were personnel entering or leaving the room (41/107, 38.3%), a phone call, bleep or page (26/107, 24.3%), a conversation not related to the task (20/107 18.7%) and noise from music or a radio (20/107, 18.7%). The trainees considered that disturbances impacted their placement of an epidural catheter in 37% of cases. They felt the task was made more difficult by the fact that during critical phases their attention was diverted from the task at hand by distractions. In addition, they felt it prolonged the time spent performing the epidural placement, although this was self-reported. Evidence for adverse outcomes caused by disturbances in a sample size of 92 would be difficult to definitively prove but two dural punctures were recorded (2/92, 2.2%) and both were recorded in cases where disturbances had occurred. The majority of disturbances were preventable and with simple interventions could have been reduced, with potential benefit to the patient.

The study served to highlight both the number of disturbances and their potential negative impact. The possibility of compromising patient care exists during multiple attempts at placement, causing distress for patients and potentially increasing complication rates. Numerous studies have shown an association between

distractions such as noise and reduced task performance.[2,3] Up to 11% of patients experience an adverse event when in hospital and half are potentially preventable.[1] Noise pollution has been shown to be a contributing factor to anaesthesia-related complications.[3] Labour wards, especially, are locations where impaired performance of complex procedures can adversely affect patients. This pilot study is the first to look at disturbances outside the operating theatre and serves as a baseline for further investigation. It is important for anaesthetists to create a "sterile cockpit" environment during a procedure and to be aware that environmental factors may negatively impact their performance. Human factors play an important role in preventing mistakes and situational awareness is a key non-technical skill that can be compromised if you are distracted. The reality is that the labour ward environment is dynamic and on many occasions it may be necessary to interrupt procedures. Nevertheless, a responsibility exists to minimise these disturbances so as to provide the highest quality care for each patient.

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Ultrasound-guided pulsed radiofrequency to the ilio-inguinal/iliohypogastric nerves to manage chronic pain after caesarean delivery in a breast-feeding woman

Caesarean delivery is a very common operation worldwide. The procedure leads to a significant incidence of chronic and persistent pain.[1] In labouring women the most common nerve injuries are those of the femoral cutaneous and femoral nerve respectively.[2] After major pelvic surgery obturator and ilio-inguinal/iliohypogastric (II/IH) nerve injury is the most common postoperative neuropathy.[3] The incidence of these latter neuropathies after gynecological surgery or a Pfannenstiel incision has been reported to be 3–7%.[4,5] The development of neuropathy may depend on many factors such as the surgical procedure and approach, the duration of surgery and patient positioning. Nerve injury may be due to the incision extending to the lateral corner of the rectus abdominis muscle, suturing of the nerve during the closure of the fascia or compression by a wound retractor or subsequent scar tissue.[6]

The World Health Organization (WHO) and UNICEF recommend that women breastfeed for the first six months after delivery. Mothers may avoid the use of medications due to potential detrimental effects on the baby caused by limited neonatal metabolism. We report a case of chronic inguinal pain that developed after caesarean delivery in a breastfeeding patient who refused to receive medical treatment and that was successfully treated with ultrasound (US)-guided II/IH nerve pulsed radiofrequency (PRF). This appears to be the first published case describing the successful application of PRF in a breastfeeding patient with a chronic neuropathy.

A 31-year-old female patient who had undergone emergency caesarean delivery under general anaesthesia three weeks previously presented to our pain clinic with pain on the left side of the incision site, which radiated the left groin. She was a breastfeeding and refused medication and hospitalisation. Initially a diagnostic block was used. With the patient supine, a linear US probe was placed on the left lower abdomen in transverse plane just above the anterior superior iliac spine. The fascia of external oblique (EO), internal oblique (IO), and transversus abdominis (TA) muscles were identified, and the II/IH nerves identified between IO and TA fascia. Using an in-plane approach from lateral to medial, a 100 mm sonovisible needle was inserted. After a negative aspiration test and 2 mL saline bolus, a total of 20 mL 0.25% bupivacaine was injected. After 30 minutes the patient's pain had improved (visual analogue scale (VAS) scores fell from nine to two). The patient re-attended the next day. Her pain had returned and by eight hours after the procedure her pain score was nine. Pulsed radiofrequency was performed using the same technique as previously described. A NeuroTherm® 10 cm radiofrequency needle with 5 mm active tip was inserted (Fig. 1) and PRF with two six-minute treatments at 42 °C were applied (NeuroTherm® NT 1100 radiofrequency device). One week later her VAS score was two and was two to three at the first-, third- and sixth-month follow-ups. No additional analgesic drugs were used.