Editorial

Reports in anaesthesia come of age!

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In March 2019, *Anaesthesia Reports*, known previously as *Anaesthesia Cases*, launched with the publication of five new case reports. As a new online-only journal, we have implemented a continuous publication model where new reports appear online shortly following acceptance and are included in an issue. This allows rapid publication as soon as an article has been peer reviewed, revised, accepted, edited and typeset. We publish two issues each year, and our first issue includes 17 excellent new reports. Each report serves some novelty, educational value or interest to our readership. In this editorial we highlight the key clinical learning points from the first issue of the new *Anaesthesia Reports* format, which is the seventh issue since the inception of *Anaesthesia Cases*.

Airway management

Awake nasal intubation with a flexible bronchoscope remains a safe procedure with a high success rate [1]. However, nasal tracheal tubes may not be the best option for mechanical ventilation in critical care and there may be several indications for a tracheal tube exchange procedure. Saunders et al. are the first to describe a novel approach to videolaryngoscope-assisted flexible intubation tracheal tube exchange, which, using a combination of several simple techniques, ensures the airway remains secure and visible throughout [2]. They provide an excellent recipe to navigate this challenging scenario which will be of use to all clinicians.

Apnoeic oxygenation was first described in 1667, but only now are we beginning to understand its underlying physiology and clinical applications [3]. This has probably increased our familiarity with high-flow nasal oxygen, which is increasingly used for self-ventilating patients in several settings. Sodha and Fernandez are the first to describe its use in combination with deep intravenous sedation for a patient with obstructive sleep apnoea requiring surgery in the prone position [4]. As well as sparking significant debate among our readership, some commented that they have seen similar techniques used in past [5] which emphasises that case reports are worth writing. If your case is novel, educational and interesting, we will consider publishing it.

Milne et al. provide a detailed description of their decision-making, as well as the relevant evidence, for how best to secure the airway of a patient with a laryngeal fracture and worsening laryngeal oedema following blunt neck trauma [6]. The associated discussion highlights how the principles of advanced airway management, such as awake tracheal intubation (ATI), are best taught and discussed when dissociated from general anaesthesia. Finally, the debate about the best technique for ATI continues, and the new Difficult Airway Society ATI guidelines are eagerly anticipated [7, 8].

Obstetric anaesthesia

Neuraxial techniques remain the ‘gold standard’ for most obstetric anaesthetic indications yet, as our reports illustrate, rare and potentially serious complications can result from their use [9]. Shields et al. report a case of subarachnoid-cutaneous fistula related to accidental dural puncture during an attempted epidural for labour analgesia [10]. Through discussing this case, which was successfully managed with skin suturing, they remind us to consider rare complications early and advocate the use of a systematic algorithm for the diagnosis and management of a clear fluid leak following dural puncture [11].

Stevens et al. describe spinal cord injury secondary to subarachnoid anaesthesia for caesarean section in a patient with a previously undiagnosed low-lying tethered spinal cord [12]. Notably, the authors reflect that asymmetry of the patient’s scapulae was observed pre-operatively but assumed to be of little importance. However, having conducted further research they believe this to be consistent with Sprengel’s Deformity, an abnormality of the pectoral girdle which is relatively common in patients with Klippel–Feil syndrome, which was ultimately diagnosed in this case.

Both reports highlight the importance of thorough assessment and robust follow-up of obstetric patients. Furthermore, they demonstrate that routine anaesthetic techniques can result in uncommon, but important, complications. This emphasises the necessity of discussing not only the side-effects of anaesthesia that occur frequently but conducting consent in a way that is mindful of ‘material risks,’ as outlined in the Montgomery case [13].

Regional anaesthesia

One of the great advantages of regional anaesthesia techniques is the potential to undertake awake surgery. Although epidurals, and more recently paravertebral blocks [14], have been successfully used for surgery involving the thoracic dermatomes, ‘paravertebral by proxy’ techniques such as the erector spinae plane (ESP) and midpoint transverse process (MTP) blocks have typically been used for analgesia. The ESP block has been reported as effective for awake breast surgery [15], and now, Costache is the first to describe the MTP block for the same purpose [16].

Poor analgesia is associated with postoperative complications, especially following major cardiac, thoracic and abdominal surgery. In addition to neuraxial, fascial plane and peripheral nerve techniques, wound infiltration of local anaesthetic with an elastomeric pump has been used electively to achieve adequate analgesia as part of a multimodal strategy. Unfortunately, in major emergency cases, analgesic strategies can be an afterthought. Lan-Pak-Kee et al. describe the elegant use of continuous local wound catheter infiltration to achieve effective analgesia following an emergent clamshell thoracotomy, thereby highlighting the lasting impact a thoughtful anaesthetic can have [17].

Dillon and Johnston remind us that when a single block does not cover the surgical area, multiple blocks can be judiciously combined to good effect [18]. In their report, they describe analgesia for a pleuropulmonary sarcoma excision via sternotomy that included a supraclavicular incision for carotid-to-subclavian artery bypass. They employed transverse thoracic muscle plane catheters combined with single-shot transversus abdominis plane blocks and superficial cervical plexus blocks with satisfactory results [5]. Beyond their undoubted peri-operative relevance, regional techniques can provide life-altering relief to patients experiencing chronic pain. Vinagre et al. present one such example where pulsed radiofrequency (PRF) of the brachial plexus was used to treat chemotherapy-induced peripheral neuropathy (CIPN) of the arm, resulting in an 80% improvement in pain intensity [19]. Although PRF is a recognised modality in treating chronic neuropathic pain, the authors should be commended for being only the second group to report on its use for CIPN.

Critical incidents

Deleterious effects of drowning include pulmonary aspiration, hypoxia, hypercarbia, hypothermia and cardiorespiratory arrest [20]. Klitgaard et al. provide a detailed account of successful resuscitation without adverse neurological sequelae following prolonged submersion in salt water [21]. Their multifaceted approach included: mechanical chest compressions for prolonged cardiopulmonary resuscitation; extracorporeal life support for rewarming, tissue perfusion and oxygenation; and continuous veno-venous haemofiltration to reverse severe metabolic acidosis and hypernatraemia. The role of a normal plasma potassium concentration, as reported here, as an immediate prognostic indicator of death in hypothermic patients following cardiac arrest is also discussed.

Clonidine has several advantageous properties when used in anaesthetic practice, but may have unwanted effects. Swift and Wilson describe successful reversal of the sedative action of clonidine using a titrated dose of naloxone [22]. Clonidine is thought to directly stimulate opioid receptors thereby releasing endogenous opioids. Naloxone acts as a competitive opioid

receptor antagonist thus reversing the opioid-induced sedative effects of clonidine. Systemic toxicity of a drug can also arise from non-prescription items. Rudge et al. discuss a case of multi-organ failure secondary to an over-the-counter topical skin-lightening salicylate-containing preparation [23]. This reminds us of the importance of taking a thorough drug history, including over-the-counter medications. Elrefaey and Pai are the first to explore appropriate sites for vascular access during pacemaker lead exchange [24]. A persuasive argument is made for siting venous access in the lower limb veins, as an unintentional vascular injury causing major haemorrhage during the procedure may occur in the superior vena cava and innominate veins.

Late and unexpected postoperative complications can arise following seemingly uneventful surgery and recovery. Cardiac tamponade following diaphragmatic surgery is a rare complication usually occurring in the intra-operative or immediate postoperative period. Weir et al. describe the successful diagnosis and management of cardiac tamponade presenting 5 weeks after elective traumatic diaphragmatic hernia repair [25]. Multispeciality input postulated the cause as delayed bleeding secondary to local trauma from a surgical fixation device near the pericardium. This case highlights how history, examination and a high level of clinical suspicion, supported by appropriate investigations, can help in diagnosis. Moreover, our last three cases, which include early postoperative seizures attributed to shigellosis, ventricular bigeminy-associated cardiomyopathy and the management of a patient with influenza A infection and sickle cell trait, remind us of the importance of diagnostic skills in peri-operative practice [26–28].

The first issue of *Anaesthesia Reports* should inspire readers to become writers, report their own cases, experiences and clinical dilemmas. Case reports have changed practice time and again, and with the inclusion of clinical images and videos, case reports still hold an invaluable place in modern academic and clinical anaesthesia.

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