of the neck and arms throughout the procedure, additionally avoiding the risk of tongue paraesthesia and standard concerns of obstetric patients undergoing general anaesthesia.

Despite the requirement to deviate from our usual perinatal blood pressure monitoring and VTE prophylaxis protocols, we were able to provide a safe and appropriate means of delivery without development of palsies peri-operatively.

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0959-289X/$ - see front matter

https://doi.org/10.1016/j.ijoa.2019.05.004

Displaced cervical spine hardware and esophageal perforation during labor

Mechanical complications of graft and plate implant in a patient with anterior cervical discectomy and fusion are well described long-term complications.[1,2]

A 35-year-old patient in the 39th week of pregnancy received labor epidural analgesia. Her past surgical history included C6-7 discectomy and fusion 10 years prior, subsequent to neck trauma in a motor vehicle accident. During labor she complained of neck pain which worsened after her vaginal delivery. The neck pain was associated with severe nuchal rigidity but neurologic examination was otherwise unremarkable. Cervical spine computed tomography (CT) revealed a screw at C6 (Fig. 1), which was displaced, and bony non-union. A magnetic resonance image (MRI) showed a soft tissue shadow with an epidural collection of fluid at C5-6 but no significant cord deformation. Gastrografin swallow showed esophageal perforation. On post-delivery day five the patient underwent surgery for removal of displaced hardware, and discectomy and fusion of C6-7, for which she was intubated fiberoptically. Following failed conservative management of the perforation, two weeks after delivery she underwent a sternocleidomastoid pedicled muscle flap for repair of the esophagus.

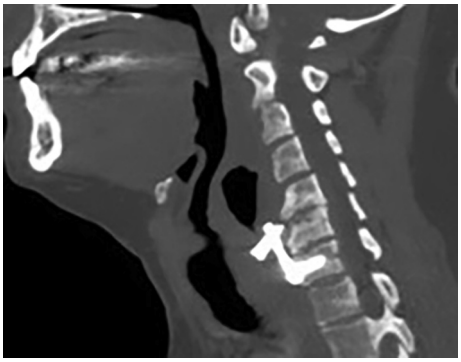

Fig. 1 Cervical spine CT showing a displaced screw at C6.

The physical changes associated with pregnancy may result in difficult endotracheal intubation and in this case the cervical spine fusion added a further challenge. We hypothesize that increased laxity of ligaments and exaggerated movement of the cervical spine during the process of labor and delivery may have resulted in movement of the hardware, causing perforation of the esophagus. In obstetric anesthesia, general anesthesia is most frequently used for emergency indications. If our patient had needed emergency intubation, our lack of knowledge of the hardware displacement might have been catastrophic.

This case emphasizes the need for meticulous clinical examination and a high degree of suspicion for possible hardware displacement in a patient with a history of cervical spine surgery, particularly in one complaining of neck pain. In such a situation having a plan to manage the patient's airway atraumatically, and with the least amount of motion and manipulation, is of paramount importance.

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