

A sensory trick for monitored anaesthesia care

Sir,

Patients with movement disorders are frequently encountered in magnetic resonance imaging (MRI) suites and anaesthesiologists' assistance is required to optimise imaging in these patients. We report the management of a case of oromandibular dystonia (OMD) with a complete heart block who was scheduled for MRI under anaesthesia.

A 65-year-old woman who was evaluated by the neurology department as a case of OMD was scheduled for an MRI of the brain and spine. Her chief complaints were repetitive movements of the jaw and tongue and difficulty in swallowing. She had a history of coronary angioplasty done 2 years ago and was on dual anti-platelets and statins. Clinical examination showed poor nourishment and a pulse rate of 46/min. Airway examination showed she was edentulous with Mallampati grade IV with normal neck movements. Cardiac evaluation (echocardiography, electrocardiogram, and Holter monitoring) revealed a complete heart block with good biventricular function. The cardiologist advised a permanent pacemaker (PPM) insertion prior to the planned procedure. However, due to worsening neurological condition and the need for a mandatory wait period of 6 weeks following PPM insertion before subjecting the patient to MRI to avoid pacemaker dysfunction, that option was deferred by the patient. Magnetic resonance conditional PPMs by Medtronic, BIOTRONIK, St. Jude Medical, and Boston Scientific are compatible with 1.5 Tesla MRI. However, these are not widely available in the Indian market and add to the cost. The option of inserting a temporary pacemaker before the procedure was not considered as it is a contraindication to MRI. In brief, concerns for sedation were the risk of major adverse cardiac events, anticipated difficult airway, anaesthetising in a remote location, and lack of in-hospital cardiology and electrophysiology back-up because our institute is a stand-alone neurosciences centre.

Our plan was to make an attempt to conduct the procedure under monitored anaesthesia care without sedation using a Lubo airway collar

and, if failed, to postpone the procedure for PPM insertion.^[1] After obtaining the informed consent, a 20 G intravenous access was secured. A Lubo airway collar was applied that reduced the involuntary movements significantly. A difficult airway cart, emergency drugs for resuscitation and a defibrillator with transcutaneous pacing pads were kept ready outside the 5 Gauss line. The procedure was under MRI-compatible electrocardiogram, pulse oximetry, and non-invasive blood pressure monitoring. The MRI was concluded in 45 min without any adverse events and with optimum image quality for interpretation. The MRI did not reveal any focal pathology. The patient was advised no further interventions and was prescribed carbamazepine. The timely imaging helped guide the course of management.

Goals of anaesthesia for procedural sedation in MRI suites include maintenance of patient immobility, comfort, and safety.^[2] Airway management becomes critical while anaesthetising OMD patients because the involuntary movements interfere with normal chewing and swallowing, resulting in malnourishment which leads to oral and pharyngeal muscle weakness. This weakness results in oropharyngeal incoordination during swallowing and increases the risk of pulmonary aspiration. Long-standing OMD results in stiffness of neck muscles and temporomandibular joint.^[3] In addition, the pharyngeal muscle weakness causes dynamic airway obstruction following sedation in these patients.

The choice of anaesthetic agent in this set of patients is dexmedetomidine.^[4,5] With respect to the present case, sedation with dexmedetomidine was a contraindication owing to the presence of a complete heart block. Hence, we conducted the procedure under monitored anaesthesia care with a Lubo airway collar. The Lubo airway collar incorporates a semi-rigid cervical collar along with an external airway protector. It has a chin holder that can produce jaw thrust [Figure 1]. The rationale behind the airway collar preventing involuntary movements can be explained by the concept of sensory trick.

Sensory trick or geste antagoniste is a mechanism described in focal dystonic patients where a specific sensory stimulation or voluntary movement minimises involuntary movements and

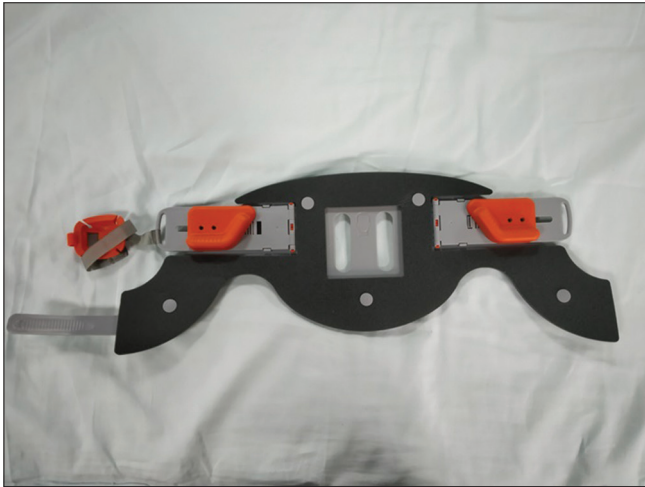


Figure 1: Lubo airway collar with chin support to provide jaw thrust

posturing.^[6] Lubos collar causes jaw thrust and this action might activate the proposed mechanism; however further research is required to validate the same.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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