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Another approach for prone positioning under general anaesthesia

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Sir,

Rotation and overextension of neck movement during prone positioning may impair blood flow in carotid and vertebral arteries that may lead to serious consequences such as cerebral[1] and cerebellar infarction,[2] hemiparesis,[1] quadriplegia[2] and phrenic nerve injury.[3] There are few patients who are prone to such complications due to the presence of pre-existing conditions such as unrecognised stenosis of carotid or vertebral arteries, presence of cervical osteophytes and vascular atherosclerosis.[4] Hypotension during positioning, the absence of monitoring and transient incomplete or complete occlusion of these vessels may lead to thrombosis and embolism.[5] Intensive precautions and application of different modalities for prone positioning in surgical patients with known cervical pathology have been advocated.[6]

Safe anaesthesia evolved incessantly by invention of new methods. We suggest a new method for prone positioning to improve patient outcome. The conventional method solely relied on anaesthesiologist’s vigilance to position patient into the prone position to avoid serious adverse events. However, we believe that the conventional method may result in minimal malalignment in expert hands as compared to significant neck instability in the hands of novices.

We suggest the following method to position the anaesthetised patient into prone position. The initial few steps are similar to the conventional method. The anaesthesiologist stands on patient’s head end and other team members on either side of the patient and the foot end. The patient’s positioning movement is
started once coordination among the team members is achieved at a loud count of ‘one-two-three’. Our method is to fix the right-hand index and middle finger on patient’s thoracic vertebral spinous process in V shape [Figure 1] and thumb, ring and little finger to lock the cervical spine. The palm is placed underneath the patient’s occiput [Figure 2]. The anaesthesiologist’s left hand holds the endotracheal tube and stabilises the patient’s head for right lateral direction for the prone positioning [Figure 2]. The anaesthesiologist’s hands will be switched other way for the left lateral direction for the prone positioning. The whole team at the loud count of three turns the patient prone while anaesthesiologist not only stabilises the head and neck but also keeps the cervical spine aligned with thoracic spine and preventing the flexion, extension and rotation of head.

We believe our suggested prone positioning method enhances the patients’ safety by locking and aligning the cervical spine with thoracic spines in patients with asymptomatic or underlying cervical spine pathology undergoing surgery. In our institution, this method has restricted the unwanted spine movement in expert as well as novice hands.

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Conflicts of interest
There are no conflicts of interest.

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