

Perioperative anterior dislocation of temporomandibular joint after use of I-gel

Dear Editor,

A 36-years-old male weighing 68 kg posted for implant removal right leg. His past history included tibial interlocking right leg under subarchnoid block 9 years back. Airway assessment revealed MPG grade I with adequate mouth opening. Investigations were within normal range and patient was graded as ASA I. On patient request general anesthesia was planned. Patient was premedicated with midazolam 0.03 mg/kg IV, dexamethasone 8 mg IV, ondansetron 4 mg, fentanyl 2 µg/kg IV followed by mask ventilation with sevoflurane 5% and nitrous oxide 50% in oxygen. Injection propofol 2 mg/kg IV slowly and a well lubricated size 4, I-gel was introduced by standard technique. After confirming adequacy of ventilation, loading dose of vecuronium 0.1 mg/kg IV was given and anesthesia was maintained with sevoflurane 2% and nitrous oxide 60% in oxygen. The procedure lasted for 1 h and was uneventful. Muscle relaxation was reversed with neostigmine 0.05 mg/kg and glycopyrolate 8 µg/kg IV and I-gel was taken out without any difficulty. As the patient regained consciousness he complained of inability to close his mouth. Patient had slurred speech and tenderness over the periauricular region. A diagnosis of anterior TM joint dislocation made and successful reduction was performed which was confirmed by C arm following which patient was

able to close his mouth and speak clearly. An X-ray was performed to confirm reduction. Patient was referred to ENT surgeon for further management.

TM joint dysfunction is collective term used to describe disorders of TM joint, muscles of mastication, and related structures. It has a prevalence of 25–50% in general population and is common in middle aged females.^[1] TMJ dislocation represent 3% of all dislocations throughout body.^[2-5]

Securing airway is routine practice in anesthesia and sometimes may require upper airway manipulations in anesthetized, heavily sedated and obtunded patients, situations where the TMJ have lost protection afforded by surrounding muscles especially when myoneural blocking drugs have been used, making it vulnerable to dysfunction and dislocation.^[6]

Diagnosis can be easily missed intraoperatively and is usually made after patient regain consciousness.^[3,4] Prolonged unconsciousness as in head injury or critically ill patient may further delay the diagnosis resulting in complications like hematoma, displacement of meniscus, temporomandibular nerve injury, fibrosis and adhesions requiring surgical intervention^[5] which not only increases patient suffering and hospital stay but also adds to financial burden.

Checking the passive range of motion of temporomandibular joint could be one of the simplest way to recognize temporomandibular dislocation even before the patient regain consciousness hence could help in early recognition and intervention.

TM joint dislocation is known complication of upper airway manipulation, however its diagnosis can be easily overlooked. We hereby emphasize on various steps that should be taken toward prevention and management. During preoperative evaluation assessment of TM joint should focus on signs and symptoms suggestive of TMJ dysfunction like presence of pain, restricted movement, hypermobility, or swelling in one or both TM joint. Simple test like interincisor distance, upper lip bite test and protrusion of lower jaw beyond the upper jaw helps to identify the patient with TM joint dysfunction. If present than patient should be counselled regarding possibility of worsening of symptoms or dislocation during general anaesthesia. Airway manipulations should be firm but gentle. Postoperatively, TM joint mobility should be assessed either by checking passive range of motion or by asking the patient to open and close their mouth.

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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