

Temporomandibular Joint (TMJ) Dislocation After LMA Insertion

S Bhandari, B Swain, M Sarkar, L Dewoolkar

Citation

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Abstract

We report a case of temporomandibular joint dislocation during LMA insertion under general anaesthesia, in a 30-years old female patient who underwent laparoscopic tubal ligation as a day care case. Temporomandibular joint dislocation was recognized at the end of surgery only after removal of LMA. Dislocation was reduced at the same time without any residual sequela. Patient did not have any past history of temporomandibular joint dysfunction .

INTRODUCTION

TMJ dislocation is not a rare complication of airway manipulation. It can occur following direct laryngoscopy, LMA insertion, fiberoptic intubation. It usually occurs following jaw thrust which is applied during the above procedures. We report a case in which TMJ dislocation occurred during LMA insertion even though jaw thrust was not applied.

CASE

A 30 yr old female patient, para 2, live 2 was scheduled for laparoscopic tubal ligation. History, physical examination and laboratory evaluations were normal and non-contributory. The mouth opening, neck movements were adequate and airway was graded as Mallampatti class I.

Anaesthesia was induced with inj.midazolam 0.03mg/kg, inj.fentanyl 1mcg/kg¹ and inj. propofol 2 mgkg⁻¹ followed by brief ventilation with isoflurane 2% and nitrous oxide 50% in oxygen using circle absorber. A completely deflated and lubricated size 3 LMA was introduced by standard technique. After confirming the position of LMA, anaesthesia was maintained with isoflurane 1% and nitrous oxide 60% in oxygen and ventilation was assisted. Inj vecuronium 0.1mg/kg was given for relaxation. The procedure lasted for 30 minutes and was uneventful throughout. At the onset of spontaneous respiration, muscle relaxation was reversed with Inj Neostigmine 0.05mg/kg and inj glycopyrrolate 8mcg/kg and LMA was removed in deeper planes of anaesthesia. After removing the LMA the patient's mouth was open and could not be closed with pressure and

there was a prominent swelling on the right side and TMJ dislocation was suspected. As the patient was still deep, the dislocation was reduced. One click was heard as the dislocation was corrected following which the mouth was closed. The patient was oxygenated with 100% till the patient developed consciousness. On emergence from anaesthesia the jaw movements were adequate and complete without any pain. On retrospective evaluation, patient did not have any history suggestive of TM joint subluxation or dislocation. The patient was referred to ENT surgeons for further follow up and on following the patient, it was found that patient's anatomy was normal and radiographs did not point to anything significant.

DISCUSSION

Temporomandibular joint (TMJ) dysfunction is a common side effect of airway manipulation particularly in an anaesthetised patient. Dislocation can occur during laryngoscopy,¹ transoral fiberoptic bronchoscopy,² and intubation with lighted stylet.³ Lipp et al found 66% incidence of minor abnormalities in a survey of 50 patients of direct laryngoscopy with no occurrence of permanent TMJ injury.¹ TM joint dislocation has been reported to occur after oral airway and nasogastric tube placement in an intubated patient. TM joint dislocation following LMA insertion is known to occur if jaw thrust is used during insertion but in our case, it occurred even though it was used.

In our case, LMA was passed in first attempt and after confirmation of its position, a bite block was placed to

prevent damage to the LMA. Intraoperative period was uneventful throughout. Once the surgical procedure was over, LMA was removed in deeper planes but the patient was not able to close her mouth. A swelling was noted in the parotid area. We tried closing her mouth but it was not possible. A diagnosis of TM joint dislocation was made. Since the patient was still in a deeper plane of anaesthesia, we reduced the dislocation by pushing both the condyles downward and backward from outside. While performing the above procedure, a click was heard and the swelling disappeared and we were able to close the mouth. If LMA is removed in the lighter plane of anaesthesia, clenching and biting effort can cause damage to the TM joint and rarely auricular nerve. In addition, TM joint reduction will require supplementation of anaesthesia. Most of the patients who developed TM joint dysfunction had a past history of joint problems but in our case there was no such history. It can also happen during manipulation of difficult airway but the airway of our patient was normal with no difficulty and no manipulation was required. The free mobility of LMA in the oral cavity, and maintenance of airway in deep plane of anaesthesia without support may be a clue for TM joint but as we did not have an idea about this, we did not look for it.

In conclusion, we would like to draw attention to fact that TM joint dislocation during LMA insertion even in previously normal functioning joint. The free mobility of LMA in the oral cavity, and maintenance of airway in deep

plane of anaesthesia without support may be a clue for TM joint dislocation. We recommend that one must check TM joint mobility after LMA removal to rule out any possibility of joint dysfunction. Also, early reduction of dislocation will avoid various complications after operation like hematoma, displacement of meniscus and damage to auriculotemporal nerve.

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Author Information

Sanjay Bhandari, M.B.B.S.

Junior Resident, Department of Anaesthesiology, K.E.M.Hospital and Seth G.S.Medical College

Bhanupratap Swain, MBBS

Junior Resident, Department of Anaesthesiology, K.E.M.Hospital and Seth G.S.Medical College

Manju Sarkar, M.D., D.A.

Professor, Department of Anaesthesiology, K.E.M.Hospital and Seth G.S.Medical College

L.V. Dewoolkar

Professor and Head of Department, Department of Anaesthesiology, K.E.M.Hospital and Seth G.S.Medical College