





An Uncommon Upper Gastrointestinal System Endoscopy Complication: Temporomandibular Joint Dislocation

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ABSTRACT Temporomandibular joint (TMJ) is a vital structure to open mouth for eating and speaking. Dislocation of the TMJ can be occurred with a trauma, excessive mouth opening, iatrogenic, endoscopy, transesophageal echocardiography. Gastrointestinal system endoscopy is an uncommon reason for the TMJ dislocation. Hardened bite, excessive mouth opening are the major reasons. Sudden presentation of the malocclusion of the mouth, severe pain can be the symptoms and palpable preauricular depression, lower jaw angle can be the findings of TMJ dislocation. Early diagnosis and performing urgent specific interventions are the main points for its management.

Keywords: Gastroscopy; complications; fracture dislocation

Temporomandibular joint (TMJ) is a vital structure to open mouth for eating and speaking. Mandibular condyle placed in the articular eminence and multiple muscles are placed all around this joint. This complex integrity helps to maintain the stabilization during the mouth movements. Anterosuperior dislocation of the mandibular condyle can occur with a trauma, excessive mouth opening (biting a material, yawning, singing, laughing, etc), iatrogenic (intubation, intraoral-dental procedures, etc), endoscopy, transesophageal echocardiography.¹⁻³ Gastrointestinal system endoscopy is an uncommon reason of the TMJ dislocation and only a few reports have mentioned on this clinical aspect. In this article, we present a TMJ dislocation caused as an upper gastrointestinal system endoscopy complication and its management.

CASE REPORT

A 42-year-old female patient applied to outpatient surgery clinic with the complaints of dyspepsia and heartburn. She had no history of metabolic disorders and trauma on her temporomandibular joint. She underwent upper gastrointestinal system endoscopy with midazolam (Dormicum; Deva Medical) 0.1 mg/kg intravenous sedation. Before the procedure teeth and mouth opening prosecuted with a plastic mouth retractor. The procedure was performed without any traumaly, gastric biopsies were taken and procedure

ended. Vomiting and gag reflex caused a sudden bite and bilateral anterior TMJ subluxation occurred. Inadequate placement of the condyles induces the masticator muscles spasm. Spasmodic muscles prevented a successful classic reduction maneuver therefore 2 mL lidocaine (Jetokain; Adeka Medical) intraarticular injection has managed to the pain control. The patient was sedated with 0.5 mg/kg propofol (Diprivan; Astra Zeneca Medical) IV infusion and TMJ reduction with intraoral route maneuver were performed gently. Soft neck brace for support and partially restriction of the mouth opening for 4 weeks help to avoid any recurrence. The patient had no problems after 4 weeks.

Written informed consent was obtained from the patient who participated in this case presentation.

DISCUSSION

TMJ dislocation is a relatively common emergency and may occur in up to 5% of the population during their lifetime.³ Dislocation of the mandible at the TMJ occurs when the mandibular condylar head is displaced completely out of the glenoid fossa and cannot be reduced by the patient. Displacement of the mandible can be acute, chronic and chronic recurrent according to the clinical onset. Oral interventions, hardened bite, excessive mouth opening are the most common causes of this clinical entity. In our case-patient underwent a transoral endoscopy and a plastic mouth retractor, which enables a secure opening for the scopes, applied. Sudden presentation of the malocclusion of the mouth, severe pain can be the symptoms of the TMJ dislocation. Palpable preauricular depression and lower jaw angle can be the findings of a manual examination. Presented case suffered a sudden pain and unexpected malocclusion of the jaw. Radiological assessment can be helpful to identify a condylar fracture prior to reduction maneuvers. In this case, dislocation of the jaw is easily revealed and radiological studies were not used to correct the diagnosis. Classic reduction maneuvers can easily place the TMJ on the glenoid fossa with sufficient masseter muscle relaxation. A good cooperation be-

tween the patient and physician may enable the procedure without sedation.⁴ Delayed or recurrent unsuccessful reduction maneuvers can cause masseter muscle spasm and intravenous medications can facilitate the reduction.⁵ Classic reduction maneuver must be used in the first attempt.⁶ In order to have a good cooperation with the patient and proper technic masseter muscle spasm prevent a quick reduction and propofol (Diprivan; Astra Zeneca Medical) sedation is needed. A few different methods that have been reported in the current literature for reduction of TMJ dislocation including the extraoral technique, combining the extra-intraoral route, the gag reflex procedure, syringe technic.⁷⁻¹⁰

TMJ dislocation can be considered as a complication of the upper gastrointestinal system endoscopy and endoscopists must be susceptible in case of this clinical aspect. Avoiding from the hardened bite and excessive mouth opening is the major preventions for TMJ dislocation during endoscopy. Early diagnosis and urgent interventions are the main points for its management.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Sertaç Ata Güler, Ahmet Mutlu; **Design:** Sertaç Ata Güler, Ahmet Mutlu; **Control/Supervision:** Turgay Şimşek, Nuh Zafer Cantürk; **Data Collection and/or Processing:** Sertaç Ata Güler, Ahmet Mutlu; **Analysis and/or Interpretation:** Turgay Şimşek, Nuh Zafer Cantürk; **Literature Review:** Sertaç Ata Güler, Turgay Şimşek, Ahmet Mutlu; **Writing the Article:** Sertaç Ata Güler, Ahmet Mutlu; **Critical Review:** Nuh Zafer Cantürk, Turgay Şimşek; **References and Fundings:** Nuh Zafer Cantürk, Ahmet Mutlu; **Materials:** Nuh Zafer Cantürk.

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