Temporo-mandibular joint dislocation: an unusual complication of transoesophageal echocardiography

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Temporo-mandibular joint dislocation is an unusual complication of transoesophageal echocardiography (TEE). We report a rare case of bilateral TMJ dislocation in an 84-year-old man prior to DC cardioversion (DCCV) for atrial flutter. Shortly after TEE and DCCV, the patient complained of bilateral facial pain. An orthopantomogram revealed bilateral TMJ dislocation. A closed reduction was performed by Maxillo-facial surgeons under intravenous anaesthesia. Although very uncommon, the physician should be aware of the complication and its management.

Keywords
Transoesophageal echocardiography • Temporo-mandibular joint dislocation

An 84-year-old gentleman was admitted to the hospital for elective transoesophageal echocardiography (TEE) followed by DC cardioversion for atrial flutter. He had no other relevant medical history. Transoesophageal echocardiography was performed under intravenous sedation with midazolam 2 mg. Intubation was uncomplicated and procedure was well tolerated by the patient. After TEE, the patient immediately underwent DC cardioversion (DCCV) which was carried out under further intravenous sedation with midazolam 2 mg and propofol 100 mg. Sinus rhythm was restored after one 200 J biphasic shock. Shortly after cardioversion, the patient complained of bilateral jaw pain. On examination there was bilateral mild swelling and tenderness at the site of temporo-mandibular joint (TMJ). An orthopantomogram was obtained, which revealed bilateral anterior TMJ dislocation (Figure 1). No focal bony abnormalities were seen in the mandible. Under intravenous anaesthesia, a closed reduction was performed by the Maxillo-facial surgeons. The patient was discharged home the same day.

Anterior TMJ dislocation occurs when the condylar process of the mandible lies anterior to the articular eminence of the glenoid fossa where it normally resides and becomes locked in the anterior superior aspect of the eminence, preventing closure of the mouth although this was not present in our case. On examination, the abnormality is usually obvious with an inability to occlude, preauricular depressions, and prominent mandibular heads anteriorly.

Iatrogenic anterior TMJ dislocations have been reported after upper gastrointestinal endoscopy, fibreoptic bronchoscopy, airway manipulation (e.g. endotracheal intubation, laryngeal mask airway insertion), dental procedure, and examinations requiring prolonged wide opening of the mouth. Temporo-mandibular joint dislocation as a complication of TEE has only been described twice before in the literature. A number of factors may predispose to TMJ dislocation. In this case, a combination of reduced muscle tone secondary to sedation and manipulation of the mandible during TEE may have contributed to the dislocation.

Transoesophageal echocardiography is considered a safe procedure with experienced operator and complication rates are exceedingly low. Although TMJ dislocation is uncommon with TEE, the operator should be aware of the complication and its management.

References

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