Temporomandibular Joint Dislocation in an 18-month-old Child

Abstract

Temporomandibular joint (TMJ) dislocation in children is extremely rare. In our case, an 18-month-old child presented with a history of inability to close her mouth. To confirm the clinical diagnosis, a computed tomogram was taken. Clinical examination and X-ray of the TMJ revealed bilateral TMJ dislocation. Bilateral TMJ reduction was achieved manually after giving analgesia and procedural sedation. This is one of the few case reports of an acute dislocation in a toddler.

Keywords: Child, dislocation, temporomandibular joint

Introduction

Temporomandibular joint (TMJ) dislocation implicates a non-self-limiting displacement of the condyle, outside of its functional positions within the glenoid fossa and posterior slope of the articular eminence.[1] An oral and maxillofacial surgeon is usually challenged in managing TMJ dislocation in children. This article is on the diagnosis and management of an 18-month-old child who presented with acute TMJ dislocation.

Case Report

An 18-month-old female child was referred to our department from a local hospital, with a 48 h history of inability to close her mouth [Figure 1]. Detailed history revealed that the child’s mother forcefully fed the child which led to the same. From the local hospital, chairside manual reduction was unsuccessful as the jaw would dislocate after the child cries. On examination, the child was tired and distressed. She was unable to occlude her teeth. She also revealed an anterior open bite and drooling saliva. The child was unable to drink or eat properly. Both condyles could be palpated outside the fossa. A computed tomogram (CT) revealed bilaterally displaced condyles anterior to the articular eminence [Figure 2]. The child was taken up for reduction under sedation. The TMJ was manually reduced. Satisfactory reduction was confirmed clinically by a return of the child’s normal dental occlusion and lower jaw mobility [Figure 3a].

Barton’s bandage was placed to prevent the recurrence of dislocation [Figure 3b]. The patient is being kept under regular follow-up, [Figure 4] and if the problem persists at a later stage, surgical correction may be required [Figure 3c].

Discussion

This is one of the few case reports of an acute dislocation in a toddler. The incidence of TMJ dislocation is highest in young women in the age group of 21–30 years, but it is extremely rare in infants.[2] TMJ dislocation has been mainly classified into three categories: acute, chronic, and chronic recurrent.[3] Acute dislocations may be associated with any number of etiologies, including prolonged mouth opening during a lengthy dental procedure, vomiting, yawning, and singing. There have also been reports of acute dislocation secondary to epileptic seizures, acute facial trauma, and direct laryngoscopy.[4]

The pathogenesis of TMJ dislocation is multifactorial, attributed to capsular weakness, ligamentous laxity, atypical eminence size (morphology or projection), myosplasm, trauma, or aberrancy in masticatory movement. In children, the articular eminences are underdeveloped and the glenoid fossa is almost flat, hence diminishing the chances of dislocation.[5] In our case, the articular eminences are well formed, thus leading to a dislocation caused due to forced feeding.

Some authors feel that the clinical diagnosis can be achieved by careful examination...
alone. Some signs should be sought such as the inability to occlude teeth, pursed lip, drooling, protruding lower jaw, and preauricular bony hard swelling. Our patient was uncooperative, and we were unable to do a comprehensive clinical examination. Due to the unavailability of a cone beam CT (CBCT), a CT was taken to have a three-dimensional representation of the dislocated TMJ and to rule out any structural abnormality.

Acute dislocations are typically addressed in a nonsurgical fashion. Conventional nonoperative methods have been described by multiple authors. The typical maneuver is described as bimanual intraoral traction, placing the thumbs at the retromolar pad/external oblique ridge and pressing inferiorly and then posteriorly, manipulating the condylar head over the preglenoid plane, seating it back in the articular fossa. This maneuver is typically done asking the patient to open the mouth so that the elevators of the mandible are relaxed. In our case, manual reduction was done following sedation. Regardless of the employed technique, once the condylar head has been reduced, a period of functional restriction is advocated. Muscle relaxants may also be prescribed. In many instances, however, a tendency toward redislocation requires the use of a chin strap/face-lift bandage for vertical traction.

The patient is being kept under regular follow-up, and if the problem persists, surgical correction may be required at a later stage.

**Conclusion**

There is a possibility that infants can present with TMJ dislocation. A surgeon may have to take a CBCT/CT to rule out any structural abnormality or any concomitant fracture if a comprehensive clinical examination is not possible. The nonsurgical management is mostly carried out under sedation.

**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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