

Neglected Adult Torticollis and Maxillofacial Deformity

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Abstract

Introduction: Torticollis was defined by Tubby in 1912. The cause of congenital torticollis is unknown. The most problematic part is sternocleidomastoid, which is shorter than usual or excessive contracted, can lead to both limited rotation and lateral bending. Asymmetry is one of the most common condition in these patients, little is known about craniofacial asymmetry prevalence and its changes due to aging. After occurrence of permanent deformity like plagiocephaly and hemihypoplasia, and even without potential of growth and remodeling, operative treatment may of little value. We report a 24-year-old girl with neglected torticollis with her postoperative results.

Case Report: 24 year old girl suffered from congenital torticollis was examined. She had asymmetry in her face and maxillofacial complex. She had cross bite and posterior open bite that makes some problems in masticatory muscles unilaterally.

Conclusion: Operation improve complications and it seems that surgery can alleviate the situation even in adult.

Keywords: Torticollis; Spine; Craniomaxillofacial; Deformity; Surgery

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Introduction

Torticollis defines a condition that patients suffer from a shorter and contracted sternocleidomastoid muscle [1,2]. Torticollis has three types: congenital, acquired and spasmodic (Table-1) [3]. Congenital muscular torticollis is the third congenital musculoskeletal anomaly [4]. The risk of CMT was reported 0.3 -2% annually with 3 to 2 male to female ratio [5]. The most common causes reported as trauma, tumor, intrauterine malposition and vessel obstruction. In adult patients, Diagnosis is completely clinically by palpation of fibrotic band, indurated mass and shortening of sternocleidomastoid (SCM) muscle [6].

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| Torticollis | Congenital | | Muscular | | | | |
|-------------|------------|--------|-------------|-------|------------|--------------------|-------------------------------|
| | Acquired | Trauma | Infection | | Neurogenic | Ocular dysfunction | Inflammation |
| | | | Head & neck | Spine | Idiopathic | Compensatory | Juvenile idiopathic arthritis |

Table 1: Differential diagnosis of torticollis [3].

Shortening and contracted SCM causes the patients' head tilt to the affected side and chin to the opposite side [4,5]. This pathology can lead to Craniomaxillofacial complications and deformities [4,7]. Mandible could be deviated to the lateral side and due to this deviation and muscle imbalance in face, mandible can be impressed asymmetrically and result in permanent deformity and Mandibular retrognathism [8].

As a result Clinical manifestations of this entity are: deviated mandible, mandible abnormalities, plagiocephaly, cranial base deformity, flat glenoid fossa, short neck of mandibular condyle, irregular condylar angle of mandible, round mandibular condyle, skeletal Angle class II or III malocclusion, lateral crossbite, vertical orbital dystopia, masticatory muscle spasm, adjacent tissue contracture and adhesion, facial asymmetry, head tilt, difficult chewing, dysphagia, decreased neck range of motion, superior oblique extraocular muscle contraction.

Case Report

Case 1: 24-year-old girl suffered from congenital torticollis was examined. Her chief complaint was facial asymmetry followed by decreased range of motion of neck and mastication. After taking comprehensive history and physical examination, acquired causes of torticollis were ruled out and muscular torticollis was considered. In physical exam asymmetry of face, short and tight SCM (band shape) in affected site, spastic contralateral SCM, decreased range of motion were detected.

She also had cross bite and posterior open bite that makes some problems in masticatory muscles unilaterally. Canting of the occlusal plane cause ipsilateral shift of mandible and crowded teeth (Canting defines by the difference of right and left sides of position of occlusal plane in vertical position of the teeth and is caused by the upwards or downwards rotation in the transversal plane of one side over the other [9]). CMT side had a deeper nasolabial, buccolabial and mentolabial lines. She had lower and smaller eye in the same side.

Her other manifestation was cup and elevated ear, flattened jaw line and mild frontal flattening. Her temporomandibular joint deformities include tenderness and weakness of temporalis and masseter in CMT side which cause deviation. She suffered from decreased maximum mouth opening too. Due to these deformities, surgical treatment was chosen and she underwent modified bipolar release of SCM.

She discharged from hospital 2 days after surgery with cervical collar and physiotherapy. She visited as a routine 2,6,12 weeks, 3 and 6 months postoperatively. In first visit range of motion of the neck and maximum mouth opening have been dramatically improved (Figure 1). After 6 months she completely satisfied with the result but facial asymmetry have been remained. Despite of canting occlusal plan, the patient had no problem with oral cavity functions.



Figure 1: Maximum mouth opening 5 days post operation in case 1 and case 2.

Case 2: 19-year-old female patient with congenital torticollis showed a little posterior cross bite, pain in her left ear which can be defined by clicking and pain in temporomandibular joint and tension in lateral and medial pterygoid muscles, however these are not her chief complaint. Extra oral examination showed asymmetry of face, short and tight SCM (band shape) in affected site, spastic contralateral SCM, decreased range of motion were detected. Severe occlusion differences was not seen.

Discussion

Wry neck or loxia is a fixed or dynamic tilt, rotation or flexion of head and neck. It is the third most common musculoskeletal anomaly that affects children especially in right side. There are many theories as suggestion such as injury. Physical examination and standard radiographs are sufficient to insure the diagnosis of CMT and for therapeutic planning [4]. The most common complaint is restricted range of motion secondary to a shortened SCM muscle with compensatory cervical and thoracic scoliosis. Since there are various pathologic entities of the head and neck which may mimic a positional tilt similar to CMT, they should be considered [8].

Ptosis of the eyelids, webbing of the neck and axilla, micrognathia, cleft palate, congenital contractures of the limb, scoliosis and malignant hyperthermia are such anomalies that associated with congenital muscular torticollis [3]. For the treatment of these specific problems two approaches are presently available and they are surgical lengthening of the muscle and more conservatively a stretching schedule to lengthen the muscle. Surgical options for the affected SCM muscle include unipolar release at the sternoclavicular origin, bipolar open tenotomy, bipolar release, transection of the middle of the muscle, Z-plasties on the attachments of the sternal muscle, and complete excision of the muscle [10].

Most of the patients suffered from migraine, temporomandibular joint weakness and tenderness, dizziness, tinnitus and masticatory muscles complications [7]. These two cases showed that younger patients suffer from less occlusion problems which are more curable.

Conclusion

Even in adult neglected torticollis surgery can improve some maxillofacial complication like asymmetry and temporomandibular disorder. Our patient had no mentioned problem except for decreased maximum mouth opening, which had been improved after one week post-operatively. Decreased neck range of motion makes problematic situation so that most of the patients are not aware of their maxillofacial and occlusal problem.

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