

CASE REPORT

UNILATERAL MASSETER HYPERTROPHY WITH UNUSUAL TWITCHING – A CASE REPORT

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ABSTRACT:

Masseteric Hypertrophy is a relatively uncommon condition that can occur unilaterally or bilaterally. Pain may be a symptom, but most frequently a clinician is consulted for cosmetic reasons. In some cases prominent exostosis at angle of the mandible are noted. Most patients complain of facial asymmetry; however, symptoms such as trismus, protrusion, and bruxism may also occur. In majority of the cases the etiological factor is unknown therefore it is considered to be idiopathic. Although numerous factors such as malocclusion, bruxism, clenching or temporomandibular joint disorders have been cited, they have not been proven completely. Diagnosis is based on awareness of the condition, clinical and radiographic findings and exclusion of more serious pathologies such as benign and malignant parotid disease, rhabdomyoma and lymphangioma. Treatment usually involves resection of portion of the masseter muscle with or without underlying bone. This paper reports a case of unilateral masseter hypertrophy with chief complaint of unusual muscle twitching treated simultaneously by surgery and pharmacotherapy.

Key words- Masseter hypertrophy, Twitching, Ramus of mandible.

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INTRODUCTION

Masseteric hypertrophy can be congenital, but more often it is acquired. The origin has been attributed to muscle hyperactivity and parafunctions originated from stressful lifestyle that causes bruxism or clenching. Idiopathic masseter muscle hypertrophy (IMMH) was first described by Legg in 1880, reporting on the case of a 10-year-old girl with concurrent idiopathic temporalis muscle hypertrophy^{1,2}. The highest incidence for this condition is in the second and third decades of life with no gender predilection^{2,9}. The masseter muscle is essential for adequate mastication and is located laterally to the mandibular ramus, and thus plays an important role in facial esthetics.

Pain may be a symptom, but most frequently a clinician is consulted for cosmetic reasons. In some cases, prominent exostosis at the angle of the mandible are noted. A hypertrophied masseter will alter facial lines, generate discomfort and produce negative cosmetic impacts for many patients^{3,4,10}. In our patient the chief complaint of patient was involuntary contraction of muscle which was very annoying to the patient. Moreover, it resulted in

trismus because of fatigue. To our knowledge, the literature does not provide with any evidence of case reported of masseter hypertrophy with twitching.

CASE REPORT

A 37 year old female patient reported in the department of Oral & maxillofacial Surgery, Punjab Government Dental College & Hospital, Amritsar with chief complaint of twitching of muscle on right side of face and difficulty in opening mouth since 20 years. Twitching was intermittent initially but has increased gradually since last 6 months. Patient consumes vegetarian diet and doesn't give any relevant family history and medical history. Patient got medicinal treatment from private practitioner but didn't get any relief. On inspection, face was asymmetrical with swelling on right side of face and muscular twitching (Figure 1 and 2).

A complete dentition with harmonious occlusion was present with normal mouth opening. On further examination involuntary contraction and relaxation of muscle was observed which subsequently led to the muscle fatigue and hence, trismus. Antegonial notch was not

prominent. OPG was advised to rule out the suspicion of any underlying pathology (Figure 3). The patient was informed about the diagnosis and counselled for the surgical removal of the masseter muscle. Complications of the procedure like hematoma, extraoral scar, infection, injury to facial nerve and postoperative trismus were informed and written consent was taken from the patient.



Figure 1 – Preoperative Frontal View

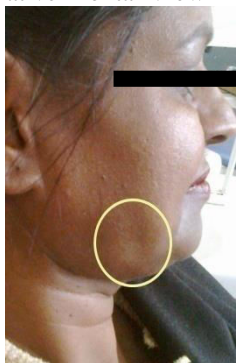


Figure 2 – Twitched muscle in lateral view

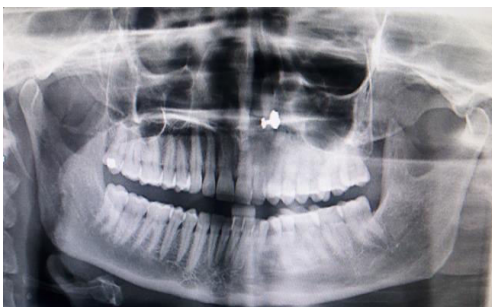


Figure 3 – Preoperative OPG

While using aseptic technique, extraoral right submandibular incision was given. Then, blunt dissection was carried out to expose the surgical site for the excision of the masseter muscle. Lower third of masseter muscle was excised (Figure 4,5,6). The inner layer closure was done with vicryl 3-0 suture and extraoral skin was closed using 3-0 silk suture and pressure dressing was given. Excised muscle was sent for histopathological examination and report confirmed the hypertrophy of masseter muscle. The patient was prescribed with postoperative analgesics

(Ibuprofen 400mg tds), antianxiety (alprazolam 0.25mg od) and antibiotic (Augmentin 625 tds) for 5 days and recalled after a week. The frequency of involuntary twitching ceased to 1-2 episodes /day for next two weeks after which it ultimately disappeared. The subsequent 3 months follow ups showed uneventful recovery.



Figure 4- masseter muscle exposed



Figure 5- Excision of muscle



Figure 6- Excised muscle



Figure 7- Postoperative frontal view



Figure 8 – Postoperative Lateral view

DISCUSSION

There are various treatment modalities for the management of masseteric hypertrophy. These can be categorized into nonsurgical and surgical. Management of the idiopathic masseter hypertrophy is based on psychological counseling, use of mouth guards, muscle relaxant, anxiolytic drugs, analgesics, physiotherapy, dental restorations and occlusal adjustments to correct premature contacts. Since no literature has been reported for case of masseter hypertrophy with twitching, the reason for occurrence for such phenomenon may be explained on the basis of increased tendency of the hypertrophic muscle for aberrant contractions and relaxations. The muscle twitches can also be caused by stress and anxiety and are often called as ‘nervous ticks’.

A satisfactory result in such patients can be achieved with surgical excision of the hypertrophied masseter muscle and anxiolytic drugs. Surgical treatment was proposed for the first time by Gurney in 1947. The procedure consists of a submandibular incision and the removal of 3/4 to 2/3 of all muscle mass.²

Alternatively, Injection of botulinum toxin type A into the masseter muscle was first introduced by Smyth⁷, Moore, and Wood in 1994⁸ and considered a less invasive modality for the treatment of muscle hypertrophy⁵. Local injection of very small doses of the toxin into a muscle produces local paralysis and therefore, individual muscles can be selectively weakened and atrophy of the muscle occurs. Perhaps the biggest disadvantage of botulinum toxin therapy is that the treatment effect wears away and reverts to the original condition in 6 months. Unlike surgical excision of muscle tissue that reduces the actual number of muscle cells, botulinum toxin type A only reduces muscle volume temporarily.⁶

Mandibular angle osteotomy was suggested by Adams in 1950. Usually surgery is carried for aesthetic reasons. Bilateral reduction of bone at the mandibular angle and an anterior repositioning of mandible by 8 mm are part of the procedure¹.

CONCLUSION

Masseter hypertrophy with muscular twitching is a rare entity to our knowledge. It can be managed by combined surgical and pharmacological modalities. Surgical approach includes excision of lower fibres of masseter muscle, accompanied with antianxiety drugs in order to reduce the neuromuscular activity.

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