

Circumscribed Myositis Ossificans of Masseter Muscle causing trismus

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Abstract:

This article discusses an interesting case report of circumscribed myositis ossificans of masseter muscle causing trismus with a review of literature on this subject. This rare disorder is characterised by dystrophic calcification leading on to heterotopic ossification (presence of bone tissue where it is not usually present) of intramuscular connective tissue. Muscles of mastication are commonly involved in this condition.

Introduction:

Myositis ossificans involving masseter muscle is rather rare. This condition is characterised by dystrophic calcification and heterotopic ossification of intramuscular connective tissue. Masticatory muscles are commonly involved.

Types of myositis ossificans:

Myositis ossificans progressiva – This is a rare congenital condition characterised by malformations involving great toes and progressive heterotopic ossification¹. Most of these cases are the result of spontaneous mutation. Genetic transmission is autosomal dominant².

Myositis ossificans circumscripta – This condition is largely limited to a single muscle mainly muscles of mastication. This is generally caused by progressive ossification of intramuscular hematoma which could be caused due to injury to the muscle. This term is used to classically describe non hereditary forms of myositis ossificans.

Myositis ossificans pseudomalignant – This is limited to soft tissue not associated with trauma. This condition can be mistaken for a malignant lesion. This condition is also considered as a premalignant lesion³.

Myositis ossificans associated with paraplegia – This type of myositis ossificans is associated with paraplegia. This could arise as a complication of spinal cord injury.

Case Report:

63 years old male patient reported to the outpatient department with complaints of:

1. Difficulty in opening the mouth – 1 month duration
2. Swelling over left side of cheek (bony hard in nature) – 2 months duration



Clinical photograph of the patient showing trismus



Clinical photograph showing swelling

He gave history of trauma 3 months back following which he developed pain while opening his mouth. This pain gradually subsided, but mouth opening got lesser and lesser.

CT image taken showed:

Well circumscribed hypodense lesion involving the left masseter area. Patchy calcification could be clearly seen within the mass.



Axial CT shows well demarcated hypodense mass with calcified areas.

Under general anesthesia under complete muscle relaxation mouth opening was attempted using a Macintosh laryngoscope. Since it was not possible to open his mouth due to severe trismus open approach to the lesion was preferred.

Incision:



Figure showing the incision

Lazy man "S" incision is used to expose the lesion. After elevation of skin and subcutaneous tissue the masseter muscle is exposed.

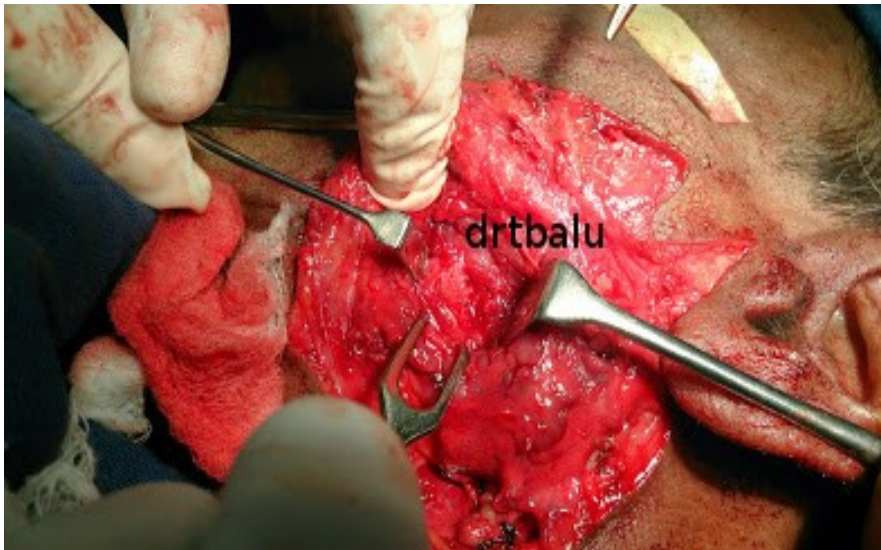


Figure showing exposure of the lesion

The masseter muscle was split open exposing the lesion. The circumscribed bony lesion is drilled out. Wound was closed in layers. Mouth opening after the surgery improved to two and half finger breadths.



Post op picture showing improved mouth opening following surgery

Patient was advised to perform mouth opening exercises by placing a plastic top inside his mouth in order to improve mouth opening still further.



Image showing plastic top being used to perform mouth opening exercises.

This case is being presented for its rarity and to stress the importance of having an open mind in treating these patients.

Discussion:

Pathophysiology of myositis ossificans begins with intramuscular haemorrhage followed by formation of vascular granulation tissue⁴. Maturation of granulation tissue results in fibroblastic proliferation with synthesis of chondroid and osteoid elements. Evidence of calcification may take 3-6 weeks to appear⁵. Even though this is a benign and self limiting disorder it needs to be treated because it interferes with the patient's ability to eat and in maintaining oral hygiene. High index of suspicion and CT imaging goes a long way in clinching the diagnosis.

Surgery should be deferred till there is functional handicap to the patient.

Indications of surgery include:

1. Increasing functional handicap due to the lesion
2. Rapidly increasing size of the lesion
3. Patients who are refractory to conservative methods of treatment

Conclusion:

This case is reported for its rarity.

Surgery is one of the option in managing these patients.

CT imaging helps in the diagnosis.

References:

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