Available online at www.sciencedirect.com

ScienceDirect

British Journal of Oral and Maxillofacial Surgery 57 (2019) 282–284

BRITISH Journal of Oral and Maxillofacial Surgery

www.bjoms.com

Short communication

Chondroid tenosynovial giant cell tumour: a rarity in the temporomandibular joint

P. Biyani [a,*], S.A. Khurram [b], M. Thomas [c], M. Nusrath [d]

[a] *Sheffield Teaching Hospitals, Sheffield, UK*
[b] *Unit of Oral and Maxillofacial Pathology, School of Clinical Dentistry, University of Sheffield, UK*
[c] *Royal Derby Hospital, Derby, UK*
[d] *Sheffield Teaching Hospitals, Sheffield, UK*

Received 8 November 2018; accepted 14 February 2019
Available online 21 March 2019

Abstract

Tenosynovial giant cell tumours of the temporomandibular joint (TMJ) are extremely rare, particularly the subset of chondroid tumours. They can be broadly divided into localised and diffuse types, of which we know of only 116 reported cases in the TMJ. Rarer still are the subset of chondroid tenosynovial giant cell tumours, of which we know of only 30 cases that have affected the TMJ. We present a case that involved the TMJ, and include a discussion of its management.

Keywords: temporomandibular joint; giant cell tumour; tenosynovial; condylectomy

Case report

A 67-year-old woman presented to the local oral and maxillofacial surgical department with a 7-8-year history of pain in her left temporomandibular joint (TMJ) that was restricting daily activities. The pain was reasonably controlled with analgesia and a soft diet, but she reported a clicking noise on the affected side, as well as a considerable deterioration in her hearing. There were no other associated symptoms or history. She was known to have medication-controlled hypertension and her social history was unremarkable.

Examination showed a non-tender swelling in the left preauricular region, with associated mandibular deviation to the left side. She had mild weakness of the buccal branch of her facial nerve, and otoscopy showed an obstructed ear canal.

Computed tomography (CT) and magnetic resonance imaging (MRI) showed a large, destructive, bony lesion involving the left mastoid, TMJ, and skull base (Fig. 1). There was also evidence of abnormal soft tissue that extended into the left ear.

An open biopsy examination of the left TMJ and histopathological analysis showed eosinophilic ovoid and spindle cells with bland nuclei, and focal accumulations of multinucleated giant cells. There were also areas of lobular myxoid structure as well as chondroid tissue in keeping with a diagnosis of chondroid tenosynovial giant cell tumour (Fig. 2). There was no evidence of malignancy.

She subsequently had a left condylectomy with interposition of a left temporalis flap (Fig. 3). Histopathological examination confirmed the initial diagnosis, though excision

* Corresponding author.
E-mail address: prateek.biyani@nhs.net (P. Biyani).

https://doi.org/10.1016/j.bjoms.2019.02.006

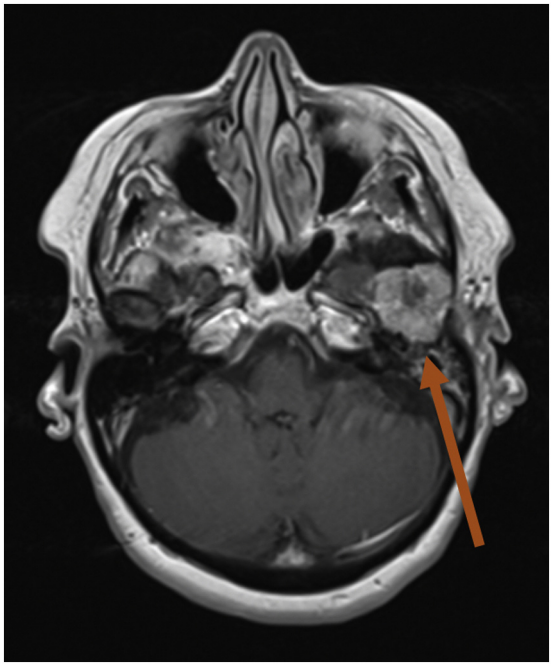

Fig. 1. Axial view of T1-weighted magnetic resonance image with tumour in the left temporomandibular joint (arrow).

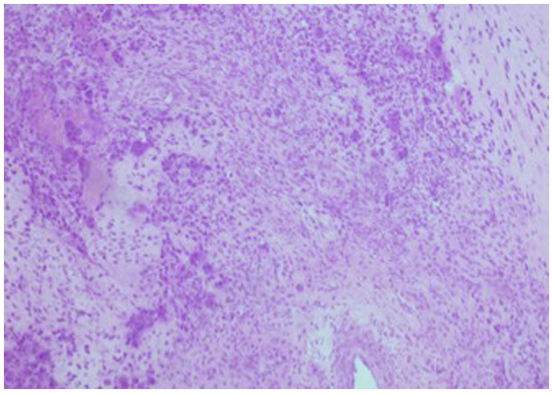

Fig. 2. Histopathological section with evidence of multinucleated giant cells, spindle cells, and chondroid areas (haematoxylin and eosin, original magnification × 200).

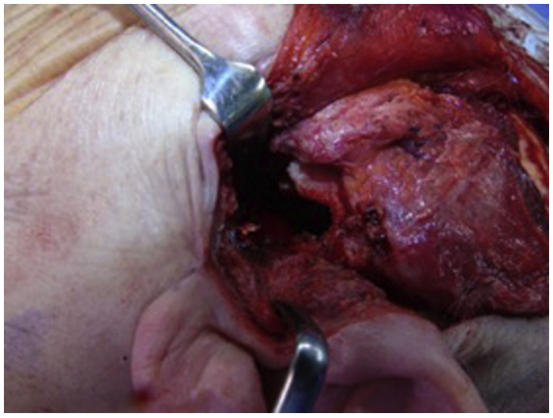

Fig. 3. Intraoperative view of tumour.

margins could not be established because the specimen was fragmented.

Her recovery was uneventful with no evidence of recurrence after 15 months, and she had excellent recovery of function.

Discussion

Tenosynovial giant cell tumours in the TMJ were first described by Lapayowker et al in 1973.[1,2,3] Though they are mostly benign, 30 malignant cases have been reported, and only one of them affected the TMJ. Benign forms may still prove to be locally destructive, and may erode the skull base.[4] Typically, they present with a preauricular mass; trismus or stiffness, or both; and clicking of the TMJ.[5] They are often misdiagnosed (particularly as dysfunction of the temporomandibular joint), and there seems to be no predilection for either sex.[1] A review identified the mean (range) duration of time to diagnosis for these patients of 30 (two months - 15 years) months.[1] Our patient had ongoing symptoms for eight years. This case highlights the importance of further investigations if conservative management is proving ineffective.

Panoramic radiographs are the first line of investigation. CT is useful in identifying the extent of the bony lesion, particularly any erosion of the skull base. However, MRI is the imaging of choice for diagnosis and management, because the presence of haemosiderin in the lesion causes a low signal intensity that results in a “blooming” effect.[6]

Preauricular swellings are often benign, but in many instances can be malignant, so diagnoses such as adenoid cystic carcinoma, mucoepidermoid carcinoma, and primary and metastatic squamous cell carcinoma have been taken into consideration in previously published papers.[7] Because of the presence of chondroid metaplasia, other lesions such as chondroblastoma and chondrosarcoma should also be considered.[2]

Histologically, chondroid tenosynovial giant cell tumours are red-brown in colour and have masses of villi, synovial folds, and are often made up of chondroid tissue that typically contains multinucleated giant cells.[5]

Because of their destructive potential, complete resection is the ideal treatment, and in severe cases or after incomplete resection, adjuvant treatment including radiotherapy may be considered.[2,4] Though there was a lack of clarity of the resection margins in our patient, close clinical follow up was recommended. A variable recurrence rate (7% -11%) of these lesions has been reported.[1] This is comparatively lower than that for recurrence in other parts of the body and because of this risk, close follow up is necessary over a period of several years.

Though they are rare, chondroid tenosynovial giant cell tumours should be considered when dealing with preauricular swellings where common diagnoses have been disproved.

Full investigation is required to assess the nature of the lesion, particularly any invasive growth, and complete resection is the gold standard, with close clinical follow up.

Conflict of interest

We have no conflicts of interest.

Ethics statement/confirmation of patient's permission

Ethics approval was not required. Written consent was obtained from the patient.

References

1. Zhang C, Zhu L, Wang L, et al. Diffuse tenosynovial giant cell tumor in the temporomandibular joint area in a Chinese population: a clinicopathological analysis of 32 cases. *Int J Clin Exp Pathol* 2016;**9**:1105–15.
2. Anbinder AL, Geraldo BM, Guimarães R Filho, et al. Chondroid tenosynovial giant cell tumor of the temporomandibular joint: a rare case report. *Braz Dent J* 2017;**28**:647–52.
3. Lapayowker MS, Miller WT, Levy WM, et al. Pigmented villonodular synovitis of the temperomandibular joint. *Radiology* 1973;**108**:313–6.
4. Bredell M, Schucknecht B, Bode-Lesniewska B. Tenosynovial, diffuse type giant cell tumor of the temporomandibular joint, diagnosis and management of a rare tumor. *J Clin Med Res* 2015;**7**:262–6.
5. Kim IK, Cho HY, Cho HW, et al. Pigmented villonodular synovitis of the temporomandibular joint – computed tomography and magnetic resonance findings: a case report. *J Korean Assoc Oral Maxillofac Surg* 2014;**40**:140–6.
6. Cheng XG, You YH, Liu W, et al. MRI features of pigmented villonodular synovitis (PVNS). *Clin Rheumatol* 2004;**23**:31–4.
7. Romañach MJ, Brasileiro BF, León JE, et al. Pigmented villonodular synovitis of the temporomandibular joint: case report and review of the literature. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2011;**111**:e17–28.