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Case report

Nodular fasciitis of the temporomandibular joint: a case report

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Abstract

Nodular fasciitis is a relatively rare benign lesion of the soft tissue, which often presents in the fascia or deep subcutaneous tissues. It most commonly presents in the upper extremities and trunk and the head and neck region, particularly in younger patients. Its pathogenesis is poorly understood and it is predominantly thought to be a reactive lesion, although some have suggested that it may be a benign neoplasm. Advances in molecular testing and imaging have greatly assisted diagnosis. We discuss the benefits of ubiquitin-specific protease 6 (USP6) gene rearrangement testing and magnetic resonance imaging (MRI) to aid this uncommon diagnosis.

Keywords: Nodular Fasciitis; Temporomandibular Joint; USP6 Gene mutation

Nodular fasciitis is often misdiagnosed as a sarcoma and managed surgically.[1] It is a rapidly-growing benign proliferation of fibroblasts and myofibroblasts with abundant, spindle-shaped cells, and high mitotic activity.[2] Our patient presented with a rapidly-growing lump in the right parotid: an ultrasound-guided fine needle aspirate was insufficient for diagnosis, and magnetic resonance imaging (MRI) showed a well-defined lump that was 20 mm in diameter (Fig. 1).

It is often difficult to diagnose nodular fasciitis from MRI because its appearance can vary on imaging, which is probably caused by its histopathological heterogeneity. As in our case, the differential diagnoses often include more common conditions, and an unusual presentation of a common entity may seem more likely.

Nodular fasciitis presents most typically in the upper extremities (46%), the trunk (20%), and the head and neck (18%).[3] It usually presents between the ages of 20 and 40 years, often with tenderness, and it is rare in children.[4] Most lesions are less than 2 cm in diameter.[3,4]

Lesions can be classified according to their location or histopathological features. Studies have linked the appearance of these lesions on MRI to their histopathological features but firm evidence is lacking.[5,6] Lesions can be found subcutaneously, fascially, or intramuscularly, and nodular fasciitis can be classified as myxoid, cellular, or fibrous.[3] As histopathological features mimic those of sarcoma, accurate diagnosis is crucial. The USP6 gene rearrangement has been shown to be a specific feature of nodular fasciitis, with one study showing sensitivity and specificity of 86% and 100%, respectively.[7] It can therefore be tested for fluorescence in situ hybridisation (FISH).[7]

The poor specificity of imaging means that lesions should be excised along with histopathological examination and USP6 testing because of the low incidence of recurrence. Intralesional corticosteroids have been described as an alternative treatment.[8]

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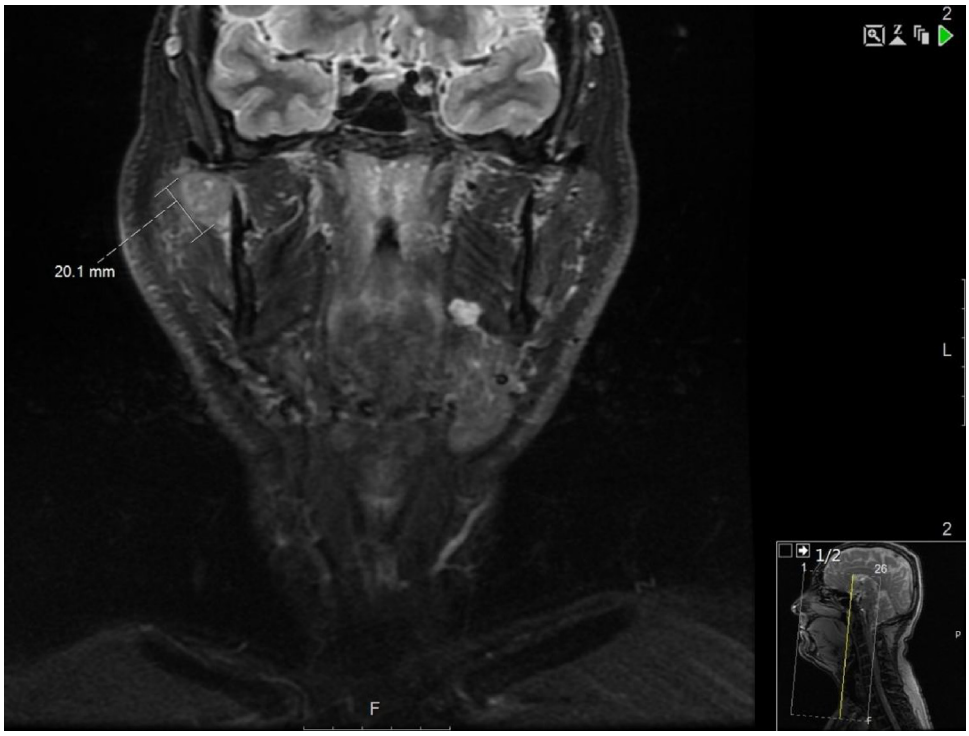

Fig. 1. Coronal slice from magnetic resonance image showing a 20 mm lesion that abuts the posterior aspect of the right masseter and contacts the lateral surface of the mandible.

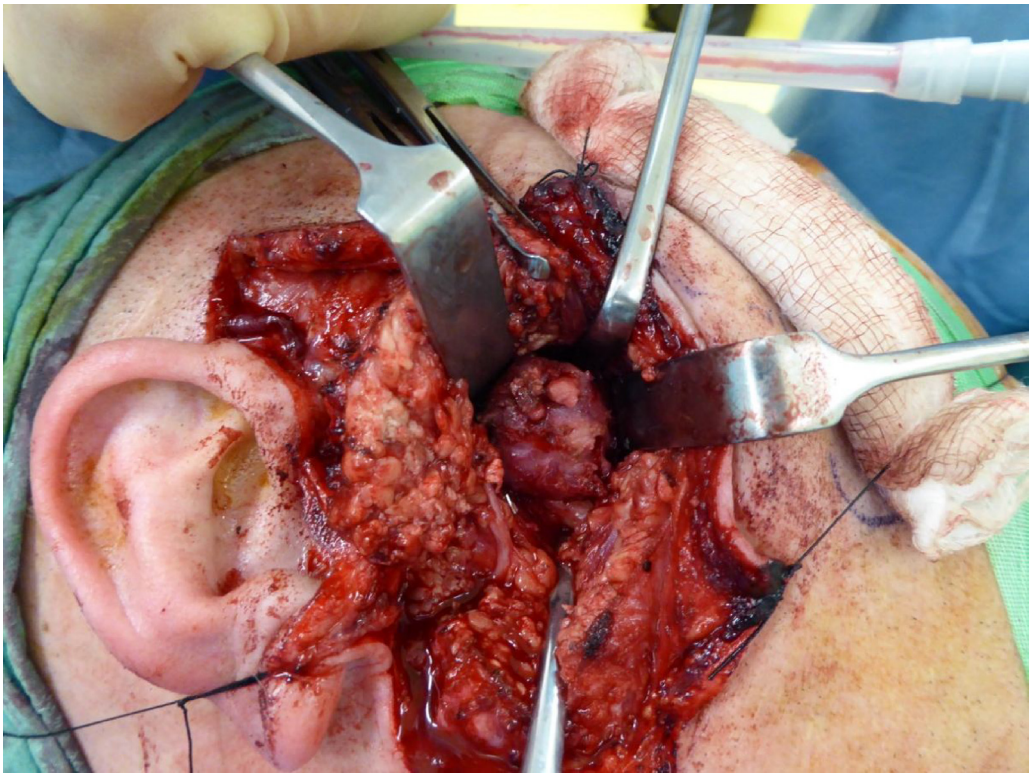

Fig. 2. Intraoperative clinical photograph showing the position of the lesion.

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