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Clinical Record

Metastatic squamous cell carcinoma of occult primary: beware the tonsillar remnant

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Abstract

Introduction: Metastasis of squamous cell carcinoma to the neck with an occult primary is a recognised clinical and pathological entity. Despite well established diagnostic protocols, this condition still represents a management challenge.

Case report: We report the case of a 46-year-old man who presented with metastatic cervical lymphadenopathy of unknown origin. He had undergone tonsillectomy as a child. The only abnormal finding was the presence of a tonsillar remnant, which harboured the primary carcinoma.

Conclusion: According to our literature search, this is the only recorded case in which the index tumour was found in a tonsillar remnant. This case illustrates the importance of thorough clinical examination in patients with potential unknown primaries, and of the need, in previously tonsillectomised patients, to perform excisional biopsy of the tonsillar remnant.

Key words: Head and Neck Neoplasms; Neoplasms, Occult Primary; Tonsil

Introduction

The presence of malignant lateral cervical lymphadenopathy in the absence of an index tumour represents a challenging diagnostic and management dilemma. The current recommended diagnostic evaluation includes a full otorhinolaryngological examination, fine needle aspiration cytology (FNAC), computerised tomography (CT) and magnetic resonance imaging (MRI), followed by upper aerodigestive tract rigid endoscopy and biopsies of the post-nasal space, ipsilateral tongue base, pyriform sinus, tonsil and any suspicious focal lesions.[1] Following this diagnostic algorithm, only 5 per cent of cases will remain truly occult.[2]

We describe the case of a 46-year-old man who presented with metastatic cervical lymphadenopathy of unknown origin. He had undergone tonsillectomy as a child. The only abnormal finding was the presence of a tonsillar remnant, which harboured the primary carcinoma. According to our literature search, this is the only recorded case in which the index tumour was found in a tonsillar remnant.

Case report

A 46-year-old man presented with a four-month history of an enlarging lateral cervical mass. He had no history of any systemic or upper aerodigestive tract symptoms. His past medical history included childhood tonsillectomy and myocardial infarction requiring coronary angioplasty, from which he had recovered well six months prior to presentation. He had previously smoked five to 10 cigars a day, but had ceased this six months ago. His alcohol consumption was moderate.

Otorhinolaryngological examination was unremarkable. Palpation of the neck revealed a 6 × 3 cm, hard but mobile mass in the left lateral aspect of his neck. Subsequent FNAC was non-diagnostic.

Computerised tomography of the neck revealed a 6.5 × 3.5 × 2.5 cm mass of multiple, enlarged lymph nodes on the left side, involving levels II and III. The mass was compressing the vessels within the carotid sheath, completely occluding the lumen of the internal jugular vein. There was a further chain of pathological lymph nodes deep to the sternocleidomastoid muscle, and a further, 4 × 3 × 2 cm lymph node mass at level IV (Figure 1). No obvious primary tumour was identified on clinical examination or on CT scan of the upper aerodigestive tract.

The patient underwent an incisional biopsy of the lymph node mass, revealing a poorly differentiated squamous cell carcinoma. He was then referred to the senior author for further management. A repeated, full otorhinolaryngological examination was unremarkable, except for an otherwise small, 1 × 0.5 cm left tonsillar remnant of normal appearance. Full upper aerodigestive tract endoscopy was performed, with biopsies of the nasopharynx, tongue base and pyriform sinus and excisional biopsy of the tonsillar remnant.

Histological analysis revealed a 6 mm, poorly differentiated squamous cell carcinoma within the tonsillar remnant.

The patient was managed with a left radical neck dissection followed by radical radiotherapy (60 Gy in 30 daily fractions) to the tonsillar fossa and both sides of the neck. Five years after completion of treatment, he remained alive and well with no signs of tumour recurrence at the primary site or the neck.

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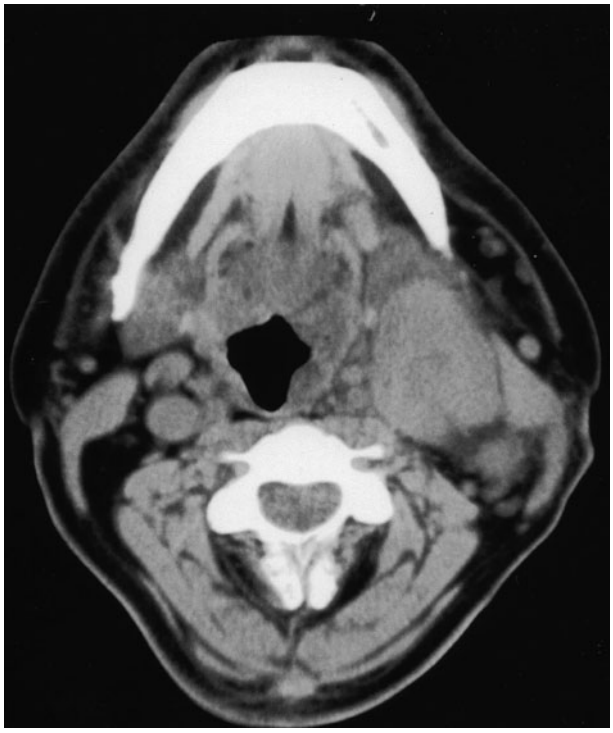

FIG. 1
Axial computerised tomography scan of the neck showing metastatic cervical lymphadenopathy at level II.

Discussion

The presence of malignant lateral cervical lymphadenopathy in the absence of an obvious index tumour represents a challenging diagnostic and management dilemma.[3,4] Of all occult primaries presenting as cervical metastasis, oropharyngeal carcinoma is the commonest, with 85 per cent being epithelial, 10 per cent lymphoma and 5 per cent of other histology.[4]

The recommended diagnostic evaluation includes full otorhinolaryngological examination, FNAC and radiological investigations, followed by upper aerodigestive tract rigid endoscopy with biopsies of the post-nasal space, tongue base, pyriform sinus, tonsil and any suspicious focal lesions.[1] By following this diagnostic algorithm, up to 95 per cent of primary index tumours will be found, and in 33 per cent of cases will be located in the tonsil or the tongue base.[5]

Careful upper aerodigestive tract examination is considered mandatory and will identify primary tumours in up to 50 per cent of patients presenting with metastatic cervical lymphadenopathy.[4] In our case, this examination was unremarkable except for a tonsillar remnant of normal appearance.

Diagnostic imaging, such as CT or MRI, should be performed before any diagnostic biopsy, in an attempt to identify the index tumour and allow adequate staging of the disease.[4] However, in our case, the tumour was only 6 mm in diameter and was therefore not detected on the CT scan. Further radiological imaging, including and positron emission tomography scans, may be useful in a certain subset of patients. However, even when such technology is available, its usefulness is yet to be proven, especially if the index tumour is smaller than 1 cm in diameter.[6]

Open incisional biopsy can potentially compromise the oncological outcome of these patients with occult metastatic squamous cell carcinoma of the neck,[7] and it should be performed in such patients only as a last resort. In the event that it is necessary, the incision should be placed in line with a neck dissection incision so that the original scar can be excised at the time of definitive surgery. It is advisable to excise an adequate wedge of the lymph node, followed by ensuring thorough haemostasis and closing the wall of the node with non-absorbable sutures. This should minimise any potential spillage of malignant cells into the fascial spaces of the neck. If incisions are subsequently excised and patients have definitive surgery or radiotherapy within an adequate time frame, this should not necessarily have an adverse effect on survival.[8] The minimum adequate temporal standards in the processing of head and neck cancer have been clearly stated.[1] Our patient underwent definitive surgery two weeks after diagnosis, and radiotherapy was commenced four weeks after surgery. He was still free of disease five years after completion of treatment.

When an excisional biopsy of a normal looking ipsilateral tonsil has revealed the presence of occult carcinoma, this is usually either a T_1 or an early T_2 tumour. In most cases, the excisional biopsy would have dealt with the index tumour. However, patients have the tonsillar fossa treated with radiotherapy as with an excision biopsy, resection margins may not be adequate or cannot be assessed by the histopathologist. In our patient the histological analysis revealed a 6 mm carcinoma within the tonsillar remnant.

In cases such as ours, the therapeutic strategy will depend on the patient's nodal status. Most patients with T_1 N_3 M_0 carcinoma of the lateral oropharyngeal wall should undergo a combined treatment modality.[9] This should provide cure rates of up to 70 per cent at five years.[10,11]

The extent of neck dissection will be determined by the degree of invasion of non-lymphatic structures by nodal masses.[1] In our patient, the mass was encroaching on the spinal accessory nerve and the internal jugular vein, and therefore a radical neck dissection was undertaken. Despite his post-operative shoulder dysfunction, the patient returned to his job as a lorry driver following intense post-operative physiotherapy.

- **The presence of malignant lateral cervical lymphadenopathy in the absence of an obvious index tumour represents a challenging diagnostic and management dilemma**
- **This paper describes the case of a 46-year-old man who presented with metastatic cervical lymphadenopathy of unknown origin. He had undergone tonsillectomy as a child. The only abnormal finding was the presence of a tonsillar remnant, which harboured the primary carcinoma**
- **This is the only recorded case in which the index tumour was found in a tonsillar remnant, and it illustrates the importance of thorough clinical examination in patients with potential unknown primaries**

This case illustrates the importance of thorough clinical examination in patients with potential unknown primaries. It also highlights the need, in previously tonsillectomised patients, for excisional biopsy of the tonsillar remnant, regardless of its innocent appearance, when searching for the index tumour.

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