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Bilateral synchronous tonsillar carcinoma

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Abstract
Synchronous cancers occur in four per cent of patients with head and neck malignancies but no bilateral synchronous tonsillar carcinomas have been described in the English literature. We describe the first such case and discuss the prognostic aspect of this carcinoma. In the presence of contralateral neck nodes in patients with head and neck malignancies, a careful search should be made for a second head and neck primary.

Key words: Tonsillar neoplasms; Carcinoma

Introduction

Carcinoma of the tonsil is the third most common malignancy of the head and neck after thyroid and laryngeal cancers (Guay and Lavertu, 1995). Synchronous cancers occur in four per cent of head and neck cancer patients (Hsairi *et al.*, 1989). We report the first synchronous bilateral tonsillar carcinoma in the English literature. This suggests they may be under reported probably because if contralateral neck disease occurs it is assumed to be from the identified tonsillar primary.

There are only two other reported cases of bilateral tonsillar carcinoma in the literature. One is a synchronous cancer in a Polish journal (Pajor *et al.*, 1995) and the other a metachronous cancer from Germany (Schondorf and Scherer, 1971).

Case report

A 73-year-old Caucasian lady was referred with a five-month history of intermittent right-sided sore throat and increasing odynophagia. She had never smoked and drank on average two units of alcohol per week.

On examination, the mucosal surface of the right tonsil was intact but the tonsil had been pushed medially by a 3 × 3 cm swelling which on palpation was continuous with the deep aspect of the tonsil. There was a single right-sided (Level 2) lymph node measuring 3 × 2 cm. The left tonsil looked normal and the rest of the neck was free of disease on palpation. Examination of the rest of the head and neck was unremarkable as were other systems.

Computerized tomography (CT) scan and magnetic resonance imaging (MRI) of the neck revealed in addition to the right-sided neck node, a 2 × 1 cm node with central necrosis (Level 2) on the left side lateral to the carotid vessels (Figures 1 and 2). A right tonsillar biopsy showed a poorly differentiated invasive squamous cell carcinoma and fine needle aspiration cytology of the right neck node revealed squamous carcinoma cells. Panendoscopy was otherwise normal and the chest X-ray was clear of metastatic disease.

The patient underwent a right radical neck dissection and excision of the right tonsillar primary by a mandibulotomy approach with reconstruction of this area with a radial forearm fasciocutaneous free flap. Frozen section of the left level 2 node confirmed invasion of the node by poorly differentiated squamous cell carcinoma. She, therefore, underwent a left selective neck dissection to clear the contralateral disease. It was noted that the left tonsil, although small, was very firm and was excised. Histology of the left tonsil showed small foci of invasive squamous cell carcinoma.

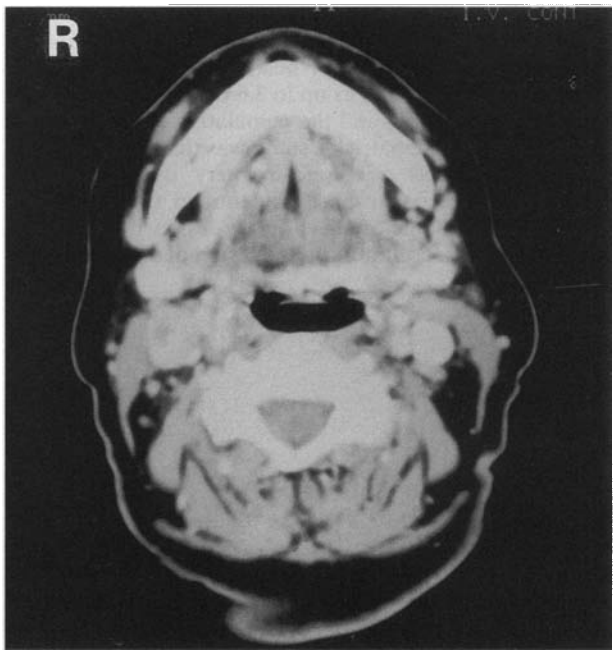

FIG. 1
Enhanced axial CT scan section at the level of the floor of the mouth showing a 3 × 2 cm right (level 2) metastatic lymph node with central necrosis.

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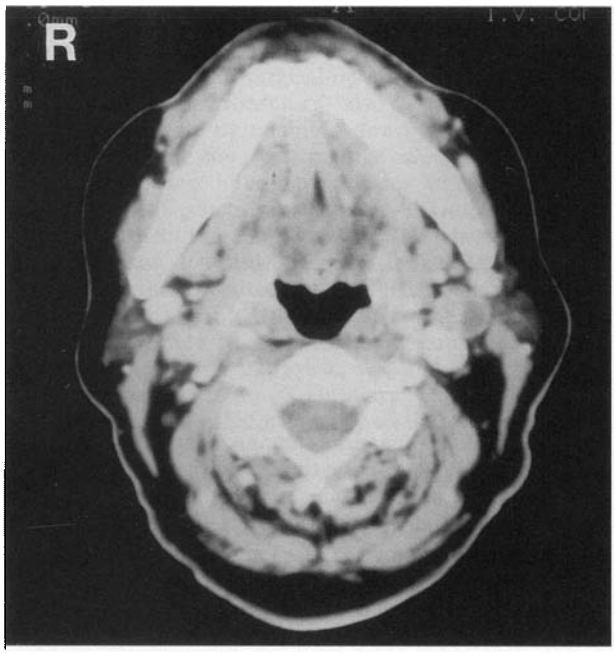

FIG. 2
Enhanced axial CT scan section 1 cm below Figure 1 showing central necrosis in a left-sided metastatic lymph node.

The patient made a rapid post-operative recovery and received adjuvant radiotherapy (60 Gy in 30 fractions to the oropharynx, the field encompassing both tonsillar fossae and 44 Gy in 22 fractions as prophylactic bilateral neck irradiation). The patient is now 10 months post-surgery and she is at present free of recurrent disease (Figure 3).

Discussion

Patients with head and neck cancer are at a high risk of developing a second primary head and neck malignancy. This has been quantified as up to 3.6 per cent (Tepperman and Fitzpatrick, 1981) and the cumulative effect of this in Tepperman and Fitzpatrick's study was that 27 per cent of patients developed a second primary over a 18-year period. If the second cancer is identified simultaneously or within six months of the primary lesion it is called a synchronous cancer. If it is after a period of six months it is called a metachronous cancer. The common sites involved with synchronous and metachronous cancers are the oropharynx, oral cavity, hypopharynx and the larynx. Second primaries can also be identified in areas other than the head and neck. In the oesophagus they are usually synchronous while in the lung they are usually metachronous (Panosetti *et al.*, 1989).

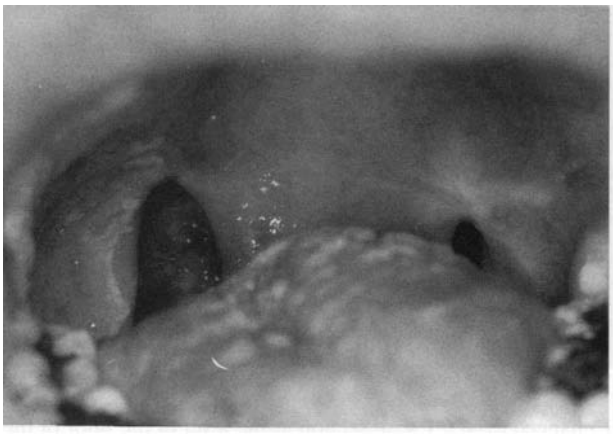

FIG. 3
Post-operative photograph showing post-radiotherapy (L) tonsillar scarring and (R) tonsillar fossa reconstructed with a radial forearm fasciocutaneous free flap.

A recently proposed explanation for a predisposition to multiple head and neck cancers supposes that these tumours arise from a single clone, which then subsequently migrate to different sites (Bedi *et al.*, 1996). The older concept of field carcinogenesis based on the hypothesis that prolonged exposure to carcinogens leads to the independent transformation of epithelial cells at multiple sites is more generally accepted. In our patient there was no history of exposure to cigarette smoke, alcohol or previous radiotherapy to the oropharynx and so the first proposal would be the more likely explanation in our case.

The prognosis of patients with multiple cancers depends on the time of detection of the secondary primary and whether treatment has to be modified because of it. Five-year survival rates are higher for metachronous cancers (55 per cent) than synchronous cancers (18 per cent) (Panosetti *et al.*, 1989). In a patient with a primary head and neck cancer not associated with a high incidence of contralateral disease, a careful search for a second head and neck primary must be made. Delay in diagnosis of a second primary may affect the patient's prognosis. If treatment has to be compromised because of the presence of two synchronous cancers, the survival rates are low (eight per cent) when compared to patients in whom treatment was not compromised (28 per cent) (Panosetti *et al.*, 1989). In our patient, the second primary was detected during the surgical procedure but the presence of synchronous primaries did not compromise the curative treatment of either primary, which may improve the prognosis.

Conclusion

Synchronous cancers in the head and neck region are well documented but we present here the first case of synchronous bilateral tonsillar carcinoma in the English literature. When contralateral neck nodes occur in patients with a head and neck primary this might be due to a synchronous contralateral head and neck cancer. Therefore, there should be a careful search for a second head and neck primary in all such cases because a delay in diagnosing and treating a second primary may compromise the patient's survival.

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