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View from Beneath—Pathology in Focus

Massive metastasis from squamous carcinoma of the tonsil

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Abstract
Squamous carcinomas of the oro-pharynx are associated with a high incidence of distant metastases at post-mortem. A case of a massive distant metastasis from a squamous cell carcinoma of the tonsil is presented. This occurred despite excellent local control. The pathology and the possible management implications are discussed.

Case report

A 70-year-old woman was admitted with a six-week history of inability to walk associated with progressive swelling and shortening of the right leg. The patient also complained of weight loss and anorexia. Four years previously a 'commando' operation to excise a squamous carcinoma of the left tonsil had been performed. The original tumour, a poorly differentiated squamous carcinoma with only focal areas of keratinization, measured 2.5 × 2 × 1.5 cm and infiltrated into the edge of the tongue musculature (Fig. 1). Four of the 11 lymph nodes in the block dissection, contained metastatic tumour but there was no evidence of any extracapsular spread. All excision margins were clear of tumour.

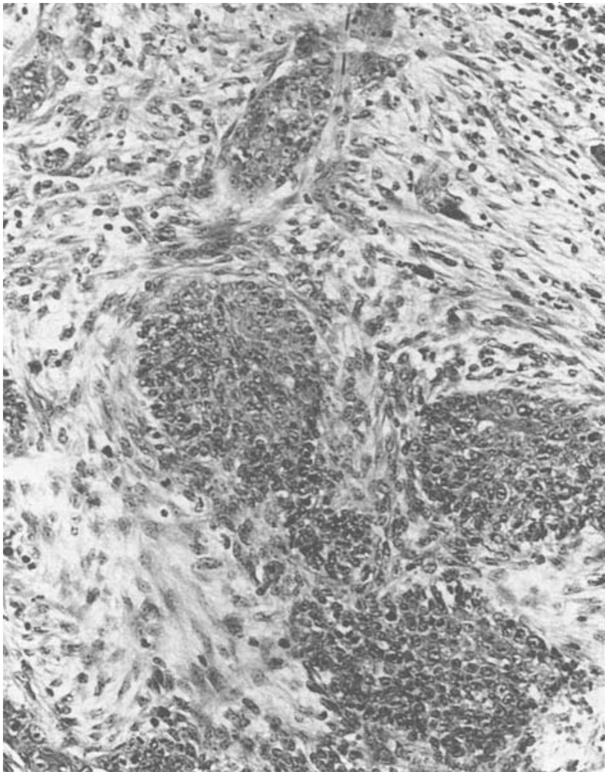

FIG. 1
Invasive border of primary squamous carcinoma of tonsil. H&E ×110.

Examination of the patient revealed emaciation. The right leg was 8 cm short and externally rotated. There was a large mass in the right hip and groin extending down from the anterior superior iliac spine. The femoral vessels were displaced medially. Peripheral neurological examination was normal. There was no evidence of recurrent tumour at the primary site or in the neck.

Radiological examination revealed an extensive area of bone destruction of the acetabulum (Figs. 2 & 3). A needle biopsy of the mass revealed a poorly differentiated squamous carcinoma with the appearances consistent with a metastasis from the tonsillar tumour (Fig. 4). The condition of the patient deteriorated terminally one week after admission. No post-mortem examination was carried out.

Discussion

Distant metastases are not usually regarded as an important clinical problem in cancers of the head and neck, with most problems being related to primary site recurrences and local

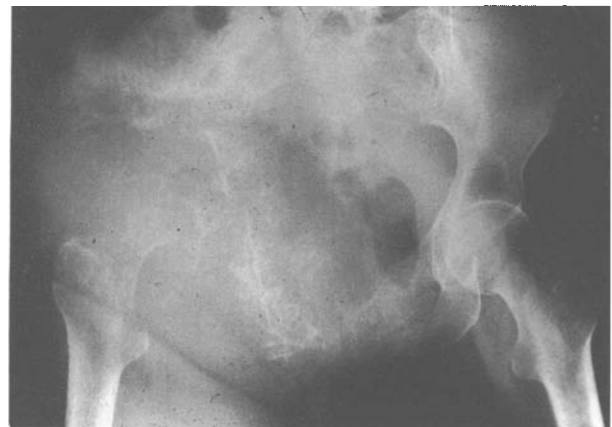

FIG. 2
X-ray of pelvis.

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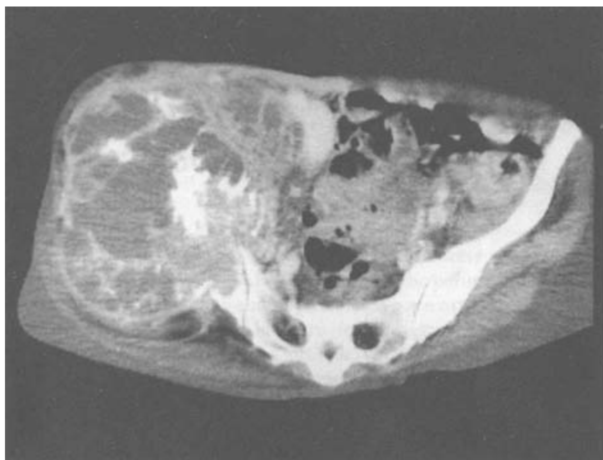

FIG. 3
CT scan of pelvis.

lymph node metastases. Early studies gave figures of distant metastases varying from 1 to 23 per cent (Crile, 1923; Braund and Martin, 1941). More recent post-mortem studies have found that up to 50 per cent of patients with head and neck cancers have distant metastases (Dennington *et al.*, 1980; Kotwall *et al.*, 1987), and it has been suggested that this rise is probably due to advances in therapy of the primary tumour, with longer survival allowing distant metastases to become evident (Dennington *et al.*, 1980). In a large post-mortem series of 832 patients with squamous carcinoma of the oropharynx, 387 (47 per cent) had distant metastases at the time of death (Kotwall *et al.*, 1987). The most common site for distant metastases was the lung (80 per cent), followed by mediastinal lymph nodes (34 per cent) with liver and bone at 31 per cent.

To improve the prediction of prognosis, Yamamoto *et al.*, (1984) devised a grading scale for squamous carcinomas of the oral cavity, with grade 1 tumours having a well defined broad-pushing front, whilst grade 4 tumours have an indistinct tumour margin with small islands and cords of cells invading the surrounding tissue. Our patient had areas of grade 4 tumour (Fig. 1). The grading scale correlated well with the incidence of lymph node metastases (Grade 1–5 per cent; Grade 4–66 per cent). Our patient had cervical lymph node metastases at the time of initial surgery, but did not develop local recurrences subsequently. No studies correlating this grading scale with incidence of distant metastasis have been published.

Ninety per cent of patients with distant metastases have uncontrolled tumour at the primary site or in the neck (Kotwall *et al.*, 1987). The reported case is therefore unusual. In view of the high incidence of distant metastatic disease identified at post-mortem, we advise that both the primary investigation and subsequent follow-up of patients, should include both liver and bone scans as well as a chest X-ray. Should metastases be found then early intervention with chemotherapy or radiotherapy may be beneficial.

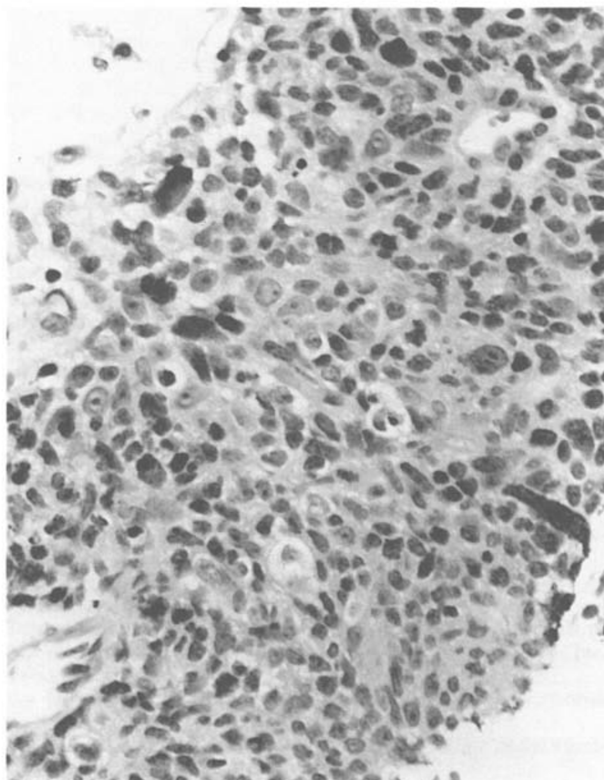

FIG. 4
Metastatic poorly differentiated squamous carcinoma in needle biopsy of pelvic mass. H&E ×275.

References

Crile, G. W. (1923) Carcinoma of the jaws, tongue, cheek and lips. *Surgery, Gynecolgoy and Obstetrics,* **36:** 159–162.

Braund, R. R., Martin, H. E. (1941) Distant metastases in cancer of the upper respiratory and alimentary tracts. *Surgery, Gynecology, and Obstetrics,* **73:** 63–71.

Dennington, M. L., Carter, D. R., Meyers, A. D. (1980) Distant metastases in head and neck epidermoid carinoma. *Laryngoscope,* **90:** 196–201.

Kotwall, C., Sako, K., Razack, M. S., Rao, U., Bakamjian, V., Shedd, D. P. (1987) Metastatic patterns in squamous cell cancer of the head and neck. *American Journal of Surgery,* **154:** 439–442.

Yamamoto, E., Miyakawa, A., Kohama, G. (1984) Mode of invasion and lymph node metastasis in squamous cell carcinoma of the oral cavity. *Head and Neck Surgery,* **6:** 938–947.

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