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Expectorated tissue leading to diagnosis of renal adenocarcinoma

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Abstract
Metastatic tumour to the tongue is extremely rare. We report a case of renal adenocarcinoma metastasis involving the right side of the base of the tongue with extension to the right vallecula in a 59-year-old man in which a piece of the metastatic lesion in the tongue was expectorated and was the first evidence of the primary tumour in the right kidney. Previously reported cases are reviewed.

Key words: Kidney neoplasms; Adenocarcinoma; Tongue neoplasms, metastasis

Introduction

Metastatic tumours to the tongue are extremely rare. Renal cancers comprise two per cent of all malignant neoplasms; renal adenocarcinoma is the most common and accounts for 80 per cent (Friedlander and Singer, 1978). Amongst metastatic tumours to the head and neck region (from the primary tumour) renal adenocarcinoma ranks third after breast and lung carcinoma (Batsakis and McBurney, 1971).

In this paper we report a case of metastatic renal adenocarcinoma to the tongue a piece of which was expectorated and was the first evidence of the primary tumour.

Case report

A 59-year-old man presented to his GP, in July 1991, with mild throat discomfort of one week's duration which had culminated in coughing up a lump of tissue. The tissue was sent to the Pathology Department at Crawley Hospital, for histological examination. Unfortunately the tissue was received dry and the pathologist was not at first convinced it was human tissue. However, microscopic examination revealed tissue consisting mainly of a clear cell tumour partly covered with squamous epithelium and partly ulcerated (Figure 1). Other prominent features of the tumour were patchy haemorrhage, infiltration by chronic inflammatory cells (especially plasma cells) and fibrin deposition (Figure 2). The appearance was that of metastatic renal adenocarcinoma, a diagnosis agreed by the histopathology panel of the Royal College of Surgeons.

The patient was seen by the ENT department one week after he had coughed up the lump of tissue. He had no history of dyspnoea or voice change nor dysphagia or weight loss.

Examination revealed a 1 × 2 cm tumour arising from the right side of the base of the tongue extending to the right vallecula. There was no cervical lymphadenopathy. A chest X-ray revealed prominent hilar shadows: A chest CT scan was normal. Intravenous urography and ultrasound of the renal system showed a solid mass 9 cm in diameter arising from the upper pole of the right kidney.

The patient underwent a right nephrectomy and local excision of the tongue tumour with diathermy to the tumour base. His surgical treatment was followed by interferon and vinblastine chemotherapy. He made a good recovery and was followed-up

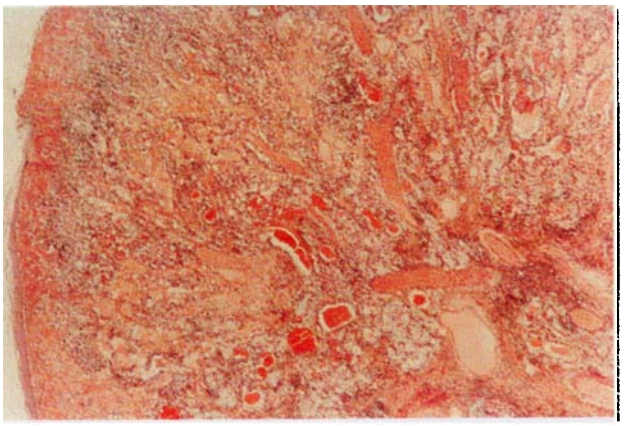

Fig. 1
Photomicrograph of the expectorated tissue showing a vascular clear cell tumour partly covered by squamous epithelium. (H&E; × 50).

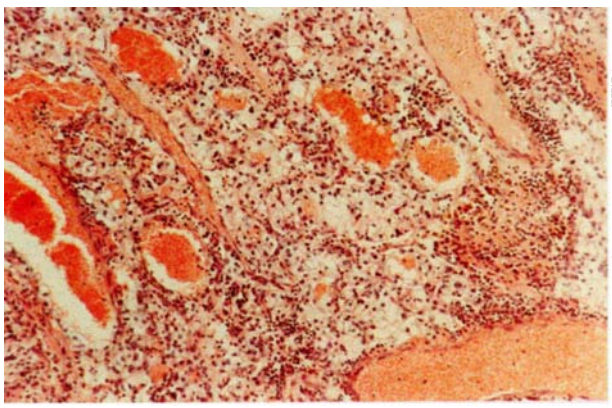

Fig. 2
Photomicrograph of the expectorated tissue (enlarged portion of Figure 1). (H&E; × 200).

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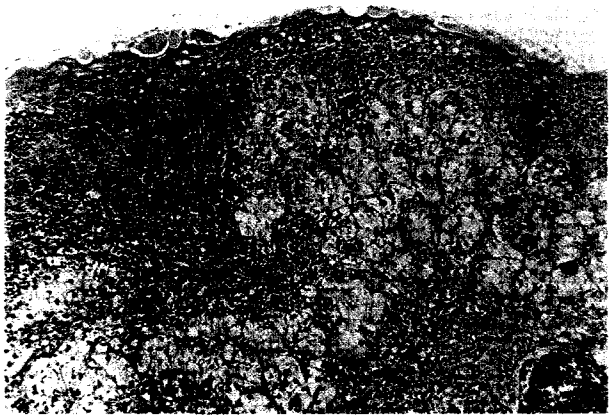

FIG. 3

Photomicrograph of the resected tongue tumour showing a haemorrhagic clear cell carcinoma covered by squamous epithelium. (H&E; × 300).

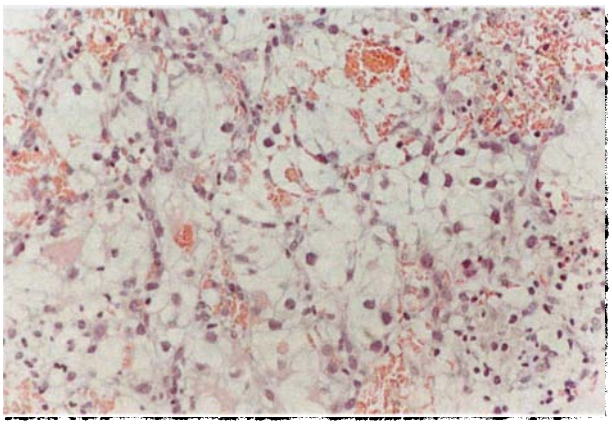

FIG. 4

Photomicrograph of the tongue tumour showing clear cells with a delicate, but distinct, cytoplasmic membrane. (H&E; × 400).

for 18 months with no sign of progression or recurrence of the tumour in the tongue.

Pathological findings

The tongue tumour showed a haemorrhagic clear cell carcinoma covered with squamous epithelium (Figure 3). The individual cells were fairly uniform in appearance. Most had a delicate, but distinct, cytoplasmic membrane (Figure 4).

The accompanying fibrous stroma was richly vascular. Stromal vessels are thin-walled, predisposing towards the leakage of blood and accumulation of haemosiderin in the stromal macrophages. The renal tumour (Figure 5) had induced fibrosis in the adjacent kidney tissue. A notable and unusual feature of the expectorated tissue, renal and tongue tumours was infiltration by a large number of plasma cells.

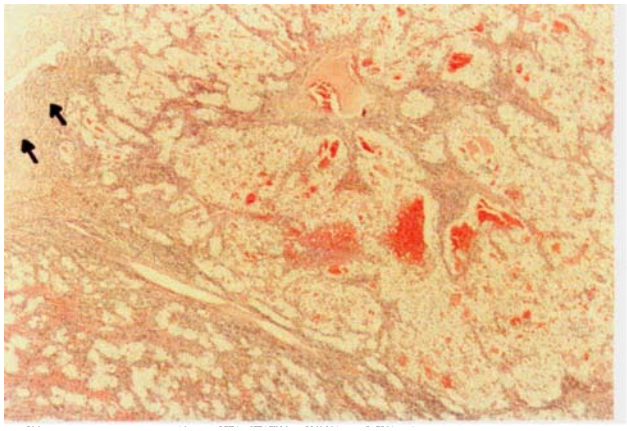

FIG. 5

Renal adenocarcinoma: the tumour has induced formation of a fibrous capsule (arrows). (H&E; × 50).

Discussion

Tumour metastasis to the head and neck from distant primaries are uncommon. Metastatic tumours from the urogenital tract, especially renal adenocarcinoma represent a significant percentage of these cases. Renal adenocarcinoma is well known for unusual metastases and a lack of predictability.

The natural history of renal adenocarcinoma is difficult to assess even when examining groups of patients who have received no treatment. Some live for many years with their disease including the case of one patient who lived for 50 years after the initial diagnosis and treatment by nephrectomy (Walter and Gillespie, 1960).

Numerous reports testify to the frequency of metastases from renal adenocarcinoma to the head and neck region. Boles and Cerny (1971) reviewed 105 cases of renal adenocarcinoma and showed that 16 (15.2 per cent) of these patient had head and neck metastases. In eight of these 16 patients the head and neck metastases accounted for the presenting symptom that led to the discovery of the primary tumour.

In a review by Batsakis and McBurney (1971) of 115 cases, of metastatic neoplasms to the head and neck, 32 (28 per cent) were of urogenital tract origin, renal adenocarcinoma ranking second to breast cancer.

The earliest signs and symptoms of renal adenocarcinoma are usually non-urological in origin, and while they may precede the usual urological signs by months or even years, they rarely call

TABLE I

PREVIOUSLY PUBLISHED CASES OF METASTATIC RENAL ADENOCARCINOMA TO THE TONGUE

Author	Year	Age	Sex	Presentation	Follow-up
(1) Kostenko	1911	43	M	Lesion on the tongue. Lymph node in the neck	Died within two months of presentation
(2) McNattin and Dean	1931	58	M	Lump on right side of the face	Died six weeks after first visit
(3) Trinca and Willis	1936	57	M	Lump on the floor of the mouth	X-ray therapy: outcome not known
(4) Satomi *et al.*	1974	41	F	Lump	Four weeks – died of the disease
(5) Friedlander and Singer	1978	84	M	Severe anaemia	Thirty days – died of the disease
(6) Fitzgerald *et al.*	1982	63	M	Discomfort	Four months – died of the disease
(7) Kitao *et al.*	1986	57	M	Discomfort	Alive
(8) Matsumoto and Iio	1987	77	F	Discomfort, bleeding	Two months – died of the disease
(9) Inai *et al.*	1987	42	M	Bleeding	Seven months – died of the disease
(10) Madison and Fereson	1988	63	M	Painful lump	Not known
(11) Okabe *et al.*	1992	58	M	Lump	Three months – alive
(12) Our case	1994	59	M	Expectorated lump of tissue	Eighteen months – alive

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attention to the possibility of a renal adenocarcinoma (Melicow and Uson, 1960). The presentation of renal adenocarcinoma by 'haematuria, pain, and a flank mass' is the triad of symptoms regarded as the classic mode of presentation. The frequency of this triad of symptoms ranges from 15 to 45 per cent of patients having renal adenocarcinoma in reported cases in the literature and is usually evidence of advanced disease with poor prognosis (Evans *et al.*, 1961).

The occurrence of metastatic renal adenocarcinoma to the tongue is rare. Table I summarizes the cases published during the present century.

Metastases in the oral cavity are a manifestation of widespread metastatic disease. Treatment is usually planned to provide palliation and patient comfort. The prognosis for patients with metastases to the tongue is poor. Most reported cases of metastatic renal adenocarcinoma which involved the tongue died within six months (Table I).

Our patient had right nephrectomy and local excision of the tongue tumour, followed by a course of interferon and vinblastine. He showed no sign of progression or recurrence of the tumour after 18 months of follow-up.

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