

Unusual multiple metastases from malignant pleomorphic adenoma of the parotid gland

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Abstract

A case of malignant pleomorphic adenoma of the left parotid gland which metastasized to the kidney and multiple subcutaneous sites is presented. The patient presented as an acute emergency due to spontaneous rupture of the kidney containing metastasis. All the distant metastatic lesions were confined to the right side of the body.

Introduction

Distant metastasis from a malignant pleomorphic adenoma is not rare. However, metastases to sites other than lung and bone are uncommon. A case of malignant pleomorphic adenoma of the parotid gland which metastasized to the kidney and multiple subcutaneous sites and presented in a very unusual manner is reported here.

Case report

A 30-year-old lady presented in April 1986 with a recurrent swelling of the left parotid gland of four months duration. In December 1985, at a local hospital, she had undergone excision of a left parotid tumour which had been quiescent for 10 years and then grew rapidly. The histopathology report was malignant pleomorphic adenoma. The recurrent parotid tumour which measured 5 × 5 cm was situated in front of the tragus of the left ear. There was no facial palsy or regional lymph node enlargement.

A left total parotidectomy preserving the facial nerve was performed on 2 June 1986. Histology revealed a malignant pleomorphic adenoma. Post-operative external radiation was

delivered to the left parotid region to a dose of 5000 cGy in 15 fractions over three weeks. In July 1987, she developed a metastatic left submandibular lymph node. As she refused further surgery, the lymph node was treated by interstitial implantation using radium needles to a dose of 5000 cGy in six days.

Her condition was uneventful for the next five months. On 2 April 1988, she collapsed at home with acute pain in the right lumbar region. She was admitted to a local hospital with features of an 'acute abdomen' and shock. An emergency laparotomy revealed a large retroperitoneal haematoma caused by a ruptured right kidney. A right nephrectomy was performed, the histology of which showed metastasis from malignant pleomorphic adenoma. Two weeks later, when she reported to our institution, she had developed multiple subcutaneous swellings on the trunk and

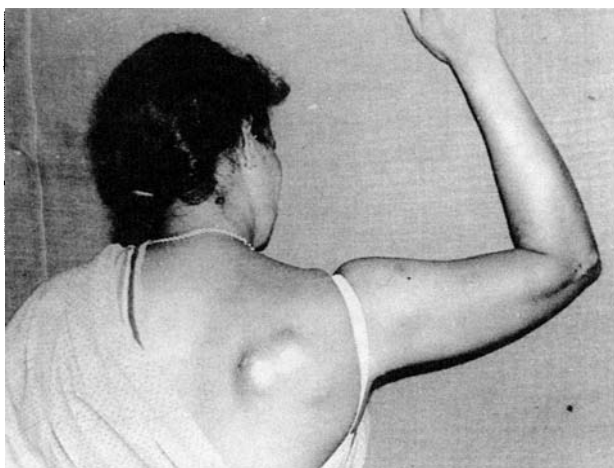


FIG. 1

Clinical photograph of the patient showing a large subcutaneous nodule over the right scapula.

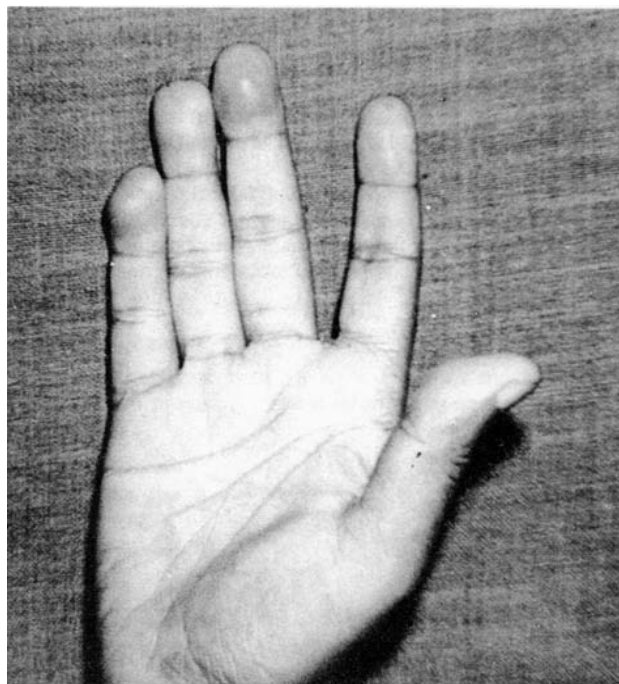


FIG. 2

Clinical photograph of the right hand showing metastatic deposits at the distal portion of middle and little fingers.

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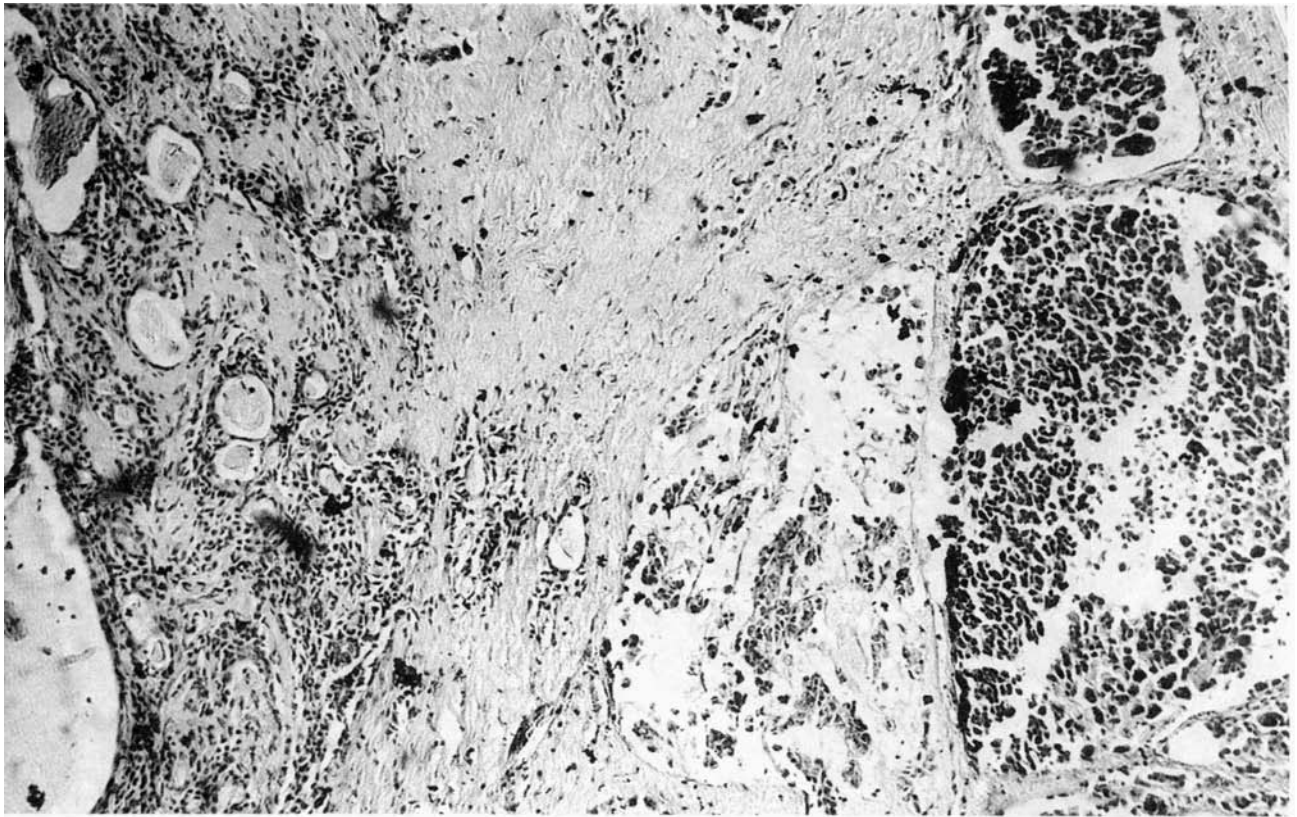
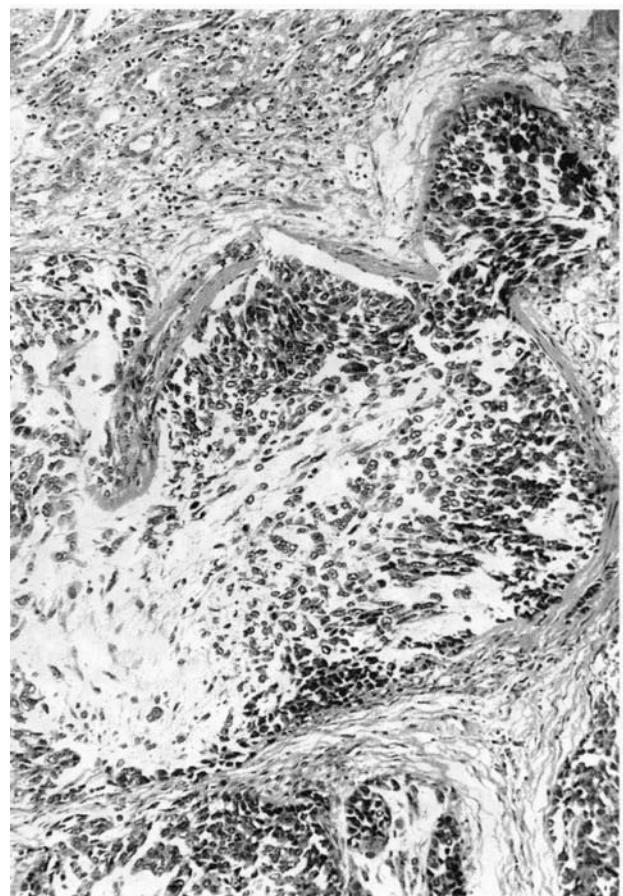
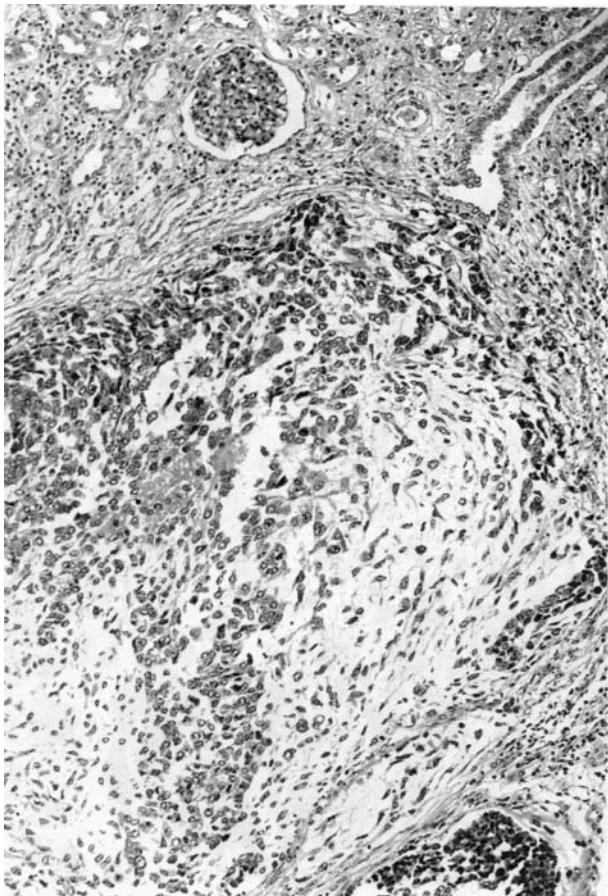


FIG. 3

Malignant pleomorphic adenoma showing carcinomatous areas and areas of pleomorphic adenoma having epithelial tubules and nests in a myxoid stroma (H&E $\times 100$)



FIGS. 4a & 4b

Sections of kidney showing infiltration by malignant pleomorphic adenoma (H&E $\times 150$)

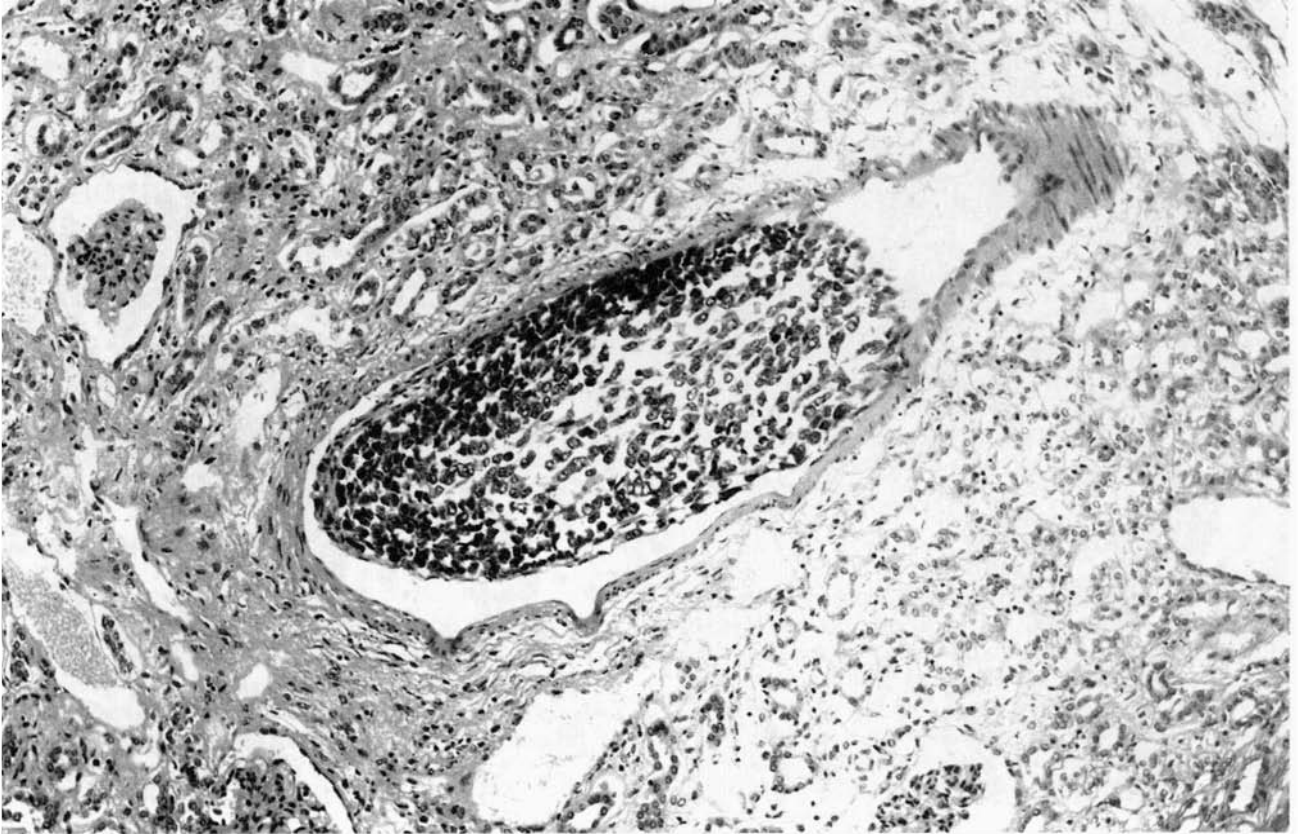


FIG. 5
Shows neoplastic embolus in interlobular vein of the kidney (H&E $\times 150$)

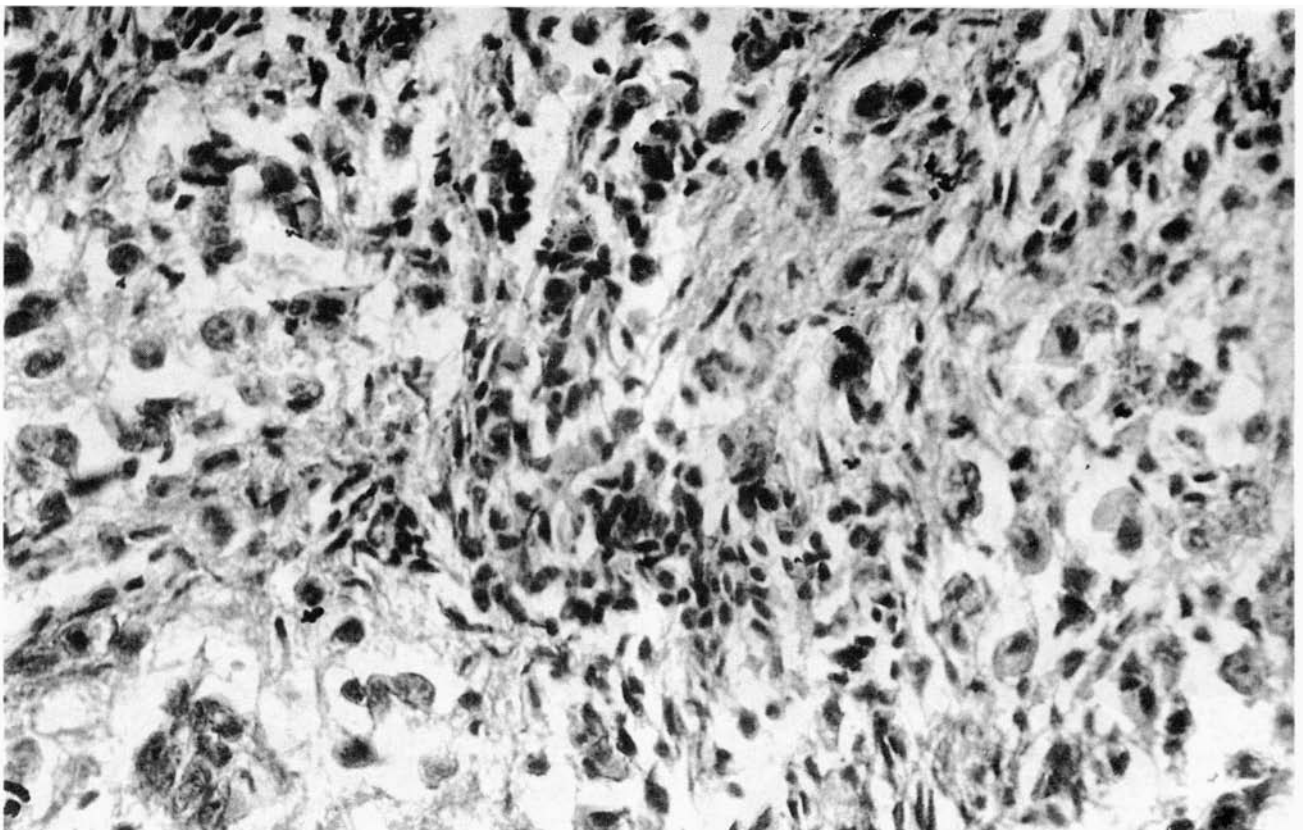


FIG. 6
Metastatic subcutaneous nodule of malignant pleomorphic adenoma (H&E $\times 400$)

both extremities, unilaterally on the right side of the body (Figs. 1 & 2). Microscopic examination of one of the excised sub-cutaneous swellings demonstrated metastasis from the malignant pleomorphic adenoma. She remained asymptomatic till September 1988 when several of the lesions ulcerated. She died at home on 2 October 1988 due to massive bleeding.

Histology

The parotid tumour showed a pleomorphic adenoma with carcinomatous and sarcomatous areas. The carcinomatous areas showed a poorly differentiated adeno pattern composed of cells having eosinophilic cytoplasm and pleomorphic vesicular nuclei with prominent nucleolus and mitotic figures. The myxoid stroma showed spindle-shaped sarcomatous cells (Fig. 3) Alcian blue PAS stain showed blue areas of acid mucin. Sections from the kidney (Figs. 4a, 4b and 5) and subcutaneous nodule (Fig. 6) showed metastases from the same neoplasm.

Discussion

Malignant pleomorphic adenomas account for about 3.3 per cent to 6.4 per cent of all malignant salivary neoplasms in reported literature (Foote and Frazell, 1953; Eneroth, 1964; Bardwill, 1967). Seventy-five per cent of these tumours arise within the parotid gland (Shidnia and Hornback, 1987).

Malignant transformation of a pleomorphic adenoma of the parotid gland is uncommon occurring in about 1.6 per cent of case (Eneroth *et al.*, 1968). The usual history is of a rapid increase in size of a long-standing parotid swelling, with or without features such as pain, fixation, ulceration of facial palsy. This patient presented with a typical history of spontaneous rapid growth of the parotid tumour which had been present for 10 years.

Lymph node metastases are found in 21 per cent of patients at initial presentation and distant metastases ultimately develop in 21 per cent of malignant pleomorphic adenomas (Johns and Kaplan, 1987). The lungs and bones are the more common sites of distant metastases but rarely the kidney and subcutaneous tissue. Thomas and Coppola (1965) could identify only one case each of metastasis to the kidney and subcutaneous tissue in a review of 45 cases of distant metastases from mixed parotid tumours. Metastases to both kidney and subcutaneous tissue in the same patient, has not been documented. This we believe, is the first such report.

While the parotid tumour was on the left side, all the distant metastatic lesions were confined to the right side of the body. The authors are unable to explain this unique and interesting finding. The mode of presentation was also unique. Spontaneous rupture of the kidney led to the detection of the renal metastasis at emergency laparotomy. Review of literature does not reveal a similar mode of presentation.

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