

Short communication

Metastasising pleomorphic adenoma of the parotid gland

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Abstract

A 33-year-old man had a left superficial parotidectomy for a pleomorphic adenoma. He remained well, but 28 years later developed a metastasis in a lymph node in the left supraclavicular fossa.

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Introduction

Pleomorphic adenomas, sometimes called benign mixed tumours, are the most common benign neoplasms of the salivary glands, accounting for 40–70% of all such neoplasms.¹ By definition these tumours do not metastasise before they are treated.

There is a rare group of salivary gland tumours, which although they are clinically and histologically identical to pleomorphic adenomas, metastasise to regional and distant sites, usually after many years. We present a case of a parotid pleomorphic adenoma that metastasised to a supraclavicular lymph node without previous local recurrence. Our case is unusual because most other reported cases are preceded by one or more local recurrences and the common sites of metastasis are bone and lung.²

Case report

A 61-year-old man, who was otherwise fit and well, presented with a slowly growing painless swelling of 10 months'

duration in the left supraclavicular fossa, and with no other symptoms. Twenty-eight years previously he had had a left superficial parotidectomy for a pleomorphic adenoma; his subsequent follow-up was uneventful and he was discharged after 5 years. When we saw him we found a mobile, non-tender, rubbery nodule, measuring 2 cm in diameter in the left supraclavicular fossa. It was not fixed to the underlying tissues or to the overlying skin, which was normal in colour. The previous left parotidectomy incision had healed well and he had symmetrical facial expression. A thorough examination of the head and neck was otherwise unremarkable. We did a fine needle aspiration biopsy, which was inconclusive. Magnetic resonance imaging (MRI) of the head and neck showed an isolated lymph node in the supraclavicular fossa with no other abnormalities including the parotid glands. Computed tomogram (CT) of chest and abdomen showed no abnormalities. We did an open biopsy and removed a circumscribed, rubbery, pink nodule. Histological examination of the specimen showed features of a typical benign pleomorphic adenoma within a lymph node and with no associated ectopic salivary gland tissue (Fig. 1). The slides were compared with those of the original pleomorphic adenoma of the parotid gland removed 28 years earlier, and identical histological features were noted (Fig. 2). There was no evidence of recurrence after 2 years and the patient remains under our care.

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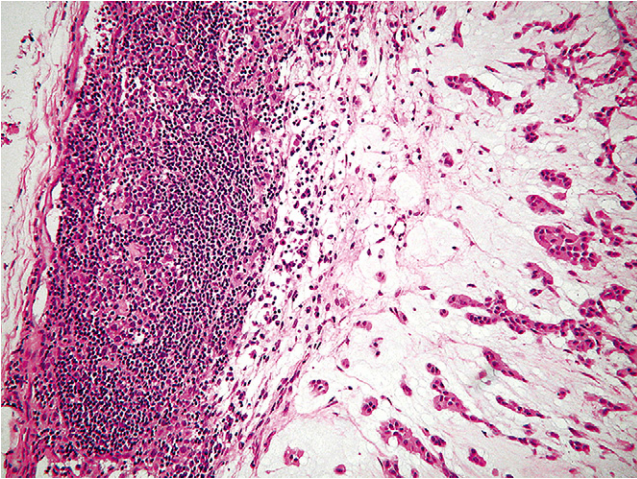


Fig. 1. Photomicrograph of metastatic salivary adenoma in a lymph node. The capsule and subcapsular sinus with a reactive germinal centre can be seen on one side. The lymph node is occupied by tissue from a pleomorphic salivary adenoma similar to that in Fig. 2 (haematoxylin and eosin, original magnification $\times 100$).

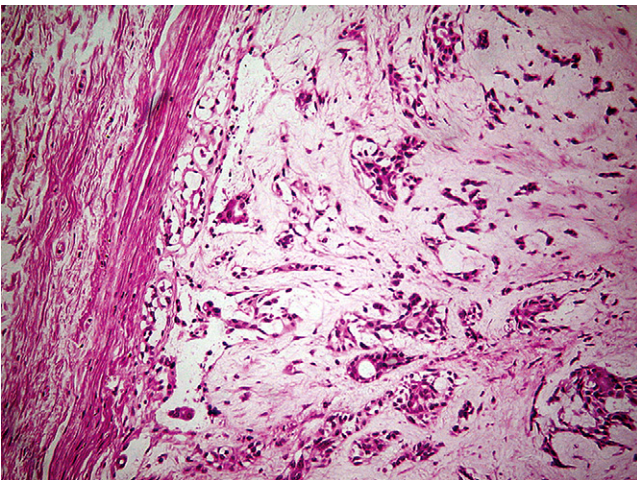


Fig. 2. Photomicrograph of pleomorphic salivary adenoma of parotid gland showing the capsule and nests, cords, and tubules of epithelioid cells in a background of myxoid stroma (haematoxylin and eosin, original magnification $\times 100$).

Discussion

Pleomorphic adenoma is the most common benign salivary neoplasm. Although clinically and histologically it is a benign tumour, there are rare reports of metastasis to regional and distant sites, in which the metastatic foci are histologically identical to the benign primary tumour.³ Recurrence of the tumour at the primary site is a characteristic feature of these metastasising pleomorphic adenomas, occurring in about 90% of cases.³ There is often a long interval between the diagnosis of the primary mixed tumour and the metastasis.²

There are no known clinical or histological features that distinguish these metastasising tumours from pleomorphic adenomas that do not recur and do not metastasise.³ It has been suggested that metastasising tumours have a higher mitotic rate than non-recurring lesions, but this theory is not universally accepted and this feature was not seen in our patient.³

The mechanism for the metastatic behaviour in these benign tumours is not clear. It is thought that surgical manipulation may allow disrupted tumour cells to be seeded through the venous or lymphatic routes.¹ This theory is supported by the long latency period between the initial resection of the primary tumour and the diagnosis of the metastasis, as well as by the high rate of recurrence of the primary tumours, suggesting disruption and seeding of the tumour.² Further support is derived from experiments in which human salivary pleomorphic adenoma has been transplanted and grown in nude mice,⁴ showing the excellent ability of pleomorphic adenoma to grow in other sites.

Haematogenous spread of pleomorphic adenoma is thought to be more common than lymphatic spread, as bones and lungs are the most obvious sites for metastasis.² Other sites of metastasis have included liver, kidney, skin, central nervous system, retroperitoneum, pharynx, and an old abdominal scar.² However, inadvertent introduction of the tumour cells into the lymphatics is the most likely mechanism in our case, and in the five other cases of cervical metastases that have been reported.^{1–3,5} Three of these were from the parotid gland, one from the nasal septum, and one from the submandibular gland and, with the exception of our case, all were associated with at least a single episode of local recurrence.²

The treatment of choice for metastases in accessible sites is excision, as they are slow growing and may remain solitary for a long time. Recurrence after complete removal is unusual and the prognosis is excellent.⁶ Metastases of these benign pleomorphic adenomas are thought to be associated with intraoperative implantation of tumour cells through vascular or lymphatic routes, so meticulous resection at the initial operation is important to prevent local recurrence and distant metastasis.

Acknowledgement

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