CASE REPORT

Isolated B-cell non-Hodgkin's lymphoma of the parotid gland presenting as an ulcerating facial mass and sepsis during an acute medical take

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SUMMARY

Lymphoma presenting as a parotid gland tumour without systemic involvement is rare, especially with respect to a non-Hodgkin's lymphoma. Furthermore, when such cases present there is often a low degree of clinical suspicion as there may be few clinical features to suggest the diagnosis. We describe an unexpected case that presented during an acute medical intake. The case was an 84-year-old man presenting acutely unwell with an ulcerating mass over the right side of the face, septicaemia and acute kidney injury. Following aggressive initial management the patient improved. Later cytological examination of a fine needle aspiration from the mass confirmed a B-cell non-Hodgkin's lymphoma. He had no evidence of other systemic involvement or of B-symptoms. We report on the case and briefly review the available literature relating to the prevalence of non-Hodgkin's lymphoma of the parotid gland.

BACKGROUND

Lymphoma presenting as a parotid gland tumour without systemic involvement is rare, especially with respect to a non-Hodgkin's lymphoma.¹ Furthermore, when such cases present there is often a low degree of clinical suspicion as there may be few clinical features to suggest the diagnosis.² Diagnosis can be especially difficult in the absence of B-symptoms (ie, fever, night sweats and weight loss) and in the absence of systemic disease. The literature contains rare reports of non-Hodgkin's lymphoma isolated to certain organs (eg, pituitary,³ salivary glands^{2 4} pancreas⁵ and spine⁶). Since the diagnosis may be difficult in the absence of systemic features, there should be an awareness and low threshold to investigate any obvious and unusual mass in any patient. We describe an unexpected case that presented during an acute medical intake with an ulcerating facial mass and septicaemia. After aggressive treatment of the acute sepsis, subsequent cytological examination of a fine needle aspirate confirmed the underlying diagnosis. We report on the case and briefly review the available literature relating to the prevalence of non-Hodgkin's lymphoma of the parotid gland.

CASE PRESENTATION

An 84-year-old man with a history of diabetes presented to the accident and emergency department of his local hospital acutely unwell with a mass

over the right side of the face. The mass had been noticed 7 weeks earlier and had gradually increased in size. The patient volunteered a history of general deterioration in his daily activities, anorexia, but no weight loss or night sweats. During the preceding week, he had experienced fevers and sweats. Examination found the patient to be febrile, tachypnoeic and hypotensive. Over the right parotid area, there was a raised, ulcerating, painful, firm mass measuring 8 cm in length (figure 1). This had surrounding erythema. No clear abscess was demonstrated and there was no discharge from the lesion. There was no evidence of cervical lymphadenopathy and the remainder of the examination was unremarkable. Of note, there was no evidence of systemic lymphadenopathy, hepatomegaly or splenomegaly.

Initial investigations showed a haemoglobin level of 6.7 g/dl (normal range: 12.5–17), white blood count $9.5 \times 10^9/l$ (4–11), platelet count $99 \times 10^9/l$ (164–347). There was evidence of an acute kidney injury with a serum potassium concentration 7.6 mmol/l (3.5–5.3), urea 20.2 mmol/l (2.5–7.8) and creatinine 247 $\mu\text{mol/l}$ (62–106). Serum lactate was elevated at 4.3 mmol/l (0.5–2.2) and there was a metabolic acidosis. The clotting tests were also deranged with a prothrombin time of 14.3 s (9.0–12.5) and activated partial thromboplastin time of 32.9 s (22.1–30.9). In line with sepsis, the C reactive protein was elevated at 61 mg/dl (0–10). A provisional diagnosis of acute renal failure with septicaemia secondary to a right parotid gland bacterial infection with facial cellulitis was made. This was managed appropriately with aggressive fluid resuscitation with intravenous crystalloid, three units of packed red cells and intravenous benlypenicillin and flucloxacillin.

Following acute treatment, the patient improved. The pyrexia resolved and facial cellulitis resolved (figure 1) and plans were made for discharge home. In view of the haematological abnormalities and the ulcerating facial lesion, a fine needle aspiration of right parotid mass was arranged. Cytological examination demonstrated diffuse high-grade large B-cell non-Hodgkin's lymphoma. Further investigations showed elevated serum lactate dehydrogenase (LDH) 1611 U/l (200–500) and β_2 -microglobulin 5.5 mg/l (0.8–2.2). The patient underwent a contrast-enhanced CT of the neck, chest, abdomen and pelvis which showed an enlarged right parotid gland with no bony destruction of the mandible. No pathological

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Figure 1 Cutaneous lesion over enlarged parotid gland (photo taken after treating the cellulitis). There was a raised ulcerating mass measuring 8 cm over the right parotid gland with a surrounding area of necrosis and cellulitis.

lymphadenopathy was demonstrated in the neck, mediastinum, lung or abdomen, and the liver and spleen were unremarkable. A subsequent bone marrow study did not show evidence of lymphomatous infiltration. Therefore, according to the Ann Arbor classification, the tumour was staged as IE.

OUTCOME AND FOLLOW-UP

The patient subsequently received a chemotherapeutic regimen of rituximab, cyclophosphamide, vincristine and prednisolone. Eighteen months following therapy, the patient is well with a normal LDH 373 U/l, haemoglobin of 10.3 g/dl and elevated but improved serum creatinine of 159 μ mol/l. At no time has the patient complained of B-symptoms.

DISCUSSION

We describe the unusual presentation of a primary non-Hodgkin's lymphoma localised to the parotid gland which was identified in an elderly man presenting with an ulcerating facial mass with cellulitis, septicaemia and acute kidney injury. Primary lymphomas localised to the salivary gland are rare and account for <5% of lymphomas and furthermore malignant lymphomas account for <2%.⁴ Of interest, a non-Hodgkin's lymphoma of the parotid or other salivary glands may appear as a painless progressively enlarging mass and therefore there should always be a low threshold to perform a fine needle aspiration or biopsy.^{7–9} From a search of the literature, only one such case has recently been reported.¹⁰ There is also a series of 12 cases identified during a 12-year period presenting to a tertiary

centre¹¹ and a series of 136 cases identified from the Scotland and Newcastle Lymphoma Registry that presented between 1979 and 1999.¹² Within the latter study, non-Hodgkin's lymphoma presenting in the parotid gland represented 1.5% of 8499 cases of non-Hodgkin's lymphoma within the registry. Within this series, the average age of presentation was 69 years with a male-to-female ratio of 1:1.3 and the majority of patients had stage IE (stage IE is disease outside the lymph system in one organ or area) at the time of presentation. The prognosis was favourable with a median survival of 90 months.¹² With respect to our case using the International Prognostic Index, owing to our patient's poor general health, his 5-year survival is calculated at 51% at the time of diagnosis. Factors which increase the risk of parotid non-Hodgkin's include chronic glandular infection and bilateral glandular hypertrophy characteristic of Sjögren syndrome.

In conclusion, we describe a rare and unusual case that presented during an acute medical intake. The patient presented with a coincidental parotid mass on the background of facial cellulitis, septicaemia and acute renal failure. Early aggressive therapy of the sepsis and early fine needle aspiration allowed fast and accurate diagnosis. Isolated non-Hodgkin's lymphoma without systemic involvement has also been described within other glandular organs (eg, pituitary³) but is rare in clinical practice.

Learning points

- ▶ Non-Hodgkin's lymphoma may present as a parotid gland mass without systemic involvement or B-symptoms.
- ▶ Patients may present with acute medical problems which may mask an underlying related medical problem such as a lymphoma.
- ▶ A fine needle aspiration is a simple diagnostic test and, in this case, was performed rapidly after the acute management which resulted in a timely diagnosis and further management plan.

Competing interests None.

Patient consent Obtained.

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