Case report: A Challenging Case of Invasive Nasopharyngeal Sarcomatoid Carcinoma

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1. Introduction

- We present the first documented case report of primary nasopharyngeal sarcomatoid carcinoma invading the skull base
- We include here a literature review of sarcomatoid carcinoma of the head and neck.
- We summarise the main learning points from this case.

2. Background

- Sarcomatoid carcinoma, also known as carcinosarcoma or spindle cell carcinoma, is a rare type of cancer.
- It is characterised by mixed elements containing spindle cells as well as epithelial carcinomatous cells.
- It carries a poor prognosis and is resistant to conventional chemoradiotherapy.

3. Clinical Assessment

History

- A 59-year-old gentleman presented with 7 weeks of worsening headache and diplopia associated with nausea and vomiting.
- There were no systemic symptoms.
- His past medical history included asthma and hypertension. He was an ex-smoker, occasional alcohol-consumer.

Examination

- The only positive finding on clinical examination was an isolated left abducens nerve palsy was noted on clinical examination.
- Flexible nasendoscopy performed by the ENT team did not reveal any abnormalities.

4. Investigations

Figure 1a, 1b. Axial and coronal plane CT reveals a destructive lytic lesion 3.58cm x 2.41cm involving the clivus, extending into pituitary fossa, and sphenoid sinus.

Figure 2. Sagittal plane MR scan of the brain, orbits and skull base with pre- and post-contrast sequences. The MR scan revealed a large heterogeneously-enhancing soft tissue mass centred on the roof of the nasopharynx extending to posterior nasal septum, both medial pterygoid plates, clivus, subdural space, left internal carotid artery, and left longus coli muscle.

Investigations Continued...

Figure 3. Eroding clival tumour noted on transnasal sphenoidotomy. Picture taken from rigid nasendoscope.

Figure 4. Histology of clival biopsy specimen under high magnification. There are fragments of irregular malignant tissue with areas of intact overlying respiratory-type mucosa. Both epithelial and connective elements were present. There are plump spindled cells arranged in fascicular pattern.

Figure 5. PET-CT scan indicating likely nasopharyngeal primary tumour. Metabolically active tumour was noted to extend inferiorly to the left fossa of Rosenmueller and longus coli muscle region of the nasopharynx.

5. Management

- The case was discussed at the Lung and Head and Neck MDT meetings. The consensus was the primary cancer was most likely nasopharyngeal.
- It was decided to commence radical chemotherapy (TPF- docetaxel, cisplatin, fluouracil), followed by a course of radiotherapy.

6. Learning points

Investigations and diagnosis

- In histology specimens of cancer containing mixed epithelial and sarcomatous elements +/- spindle cells, sarcomatoid carcinoma should be considered as a differential diagnosis.
- Sarcomatoid carcinoma in the head and neck can represent either primary or metastatic disease.
- A multidisciplinary approach to diagnostic and management challenges is essential.

Management

- Sarcomatoid carcinoma is rare, and carries a poor prognosis.
- Evidence for treatment is limited, especially for nasopharyngeal sarcomatoid carcinoma.
- All cases should be discussed at the appropriate MDT meetings, and consensus should be sought.
- Treatment approaches include surgery, chemotherapy, radiotherapy, and palliative.