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Introduction
Odontogenic sarcoma is a mixed odontogenic tumor

1. Benign epithelial component
2. Malignant mesenchymal component

- Benign epithelial component:
  - Ameloblastoma or ameloblastic fibroma
- Malignant mesenchymal component:
  - Fibrosarcoma

- If there is dentin → ameloblastic dentinosarcoma
  - Dentin/enamel → ameloblastic odontosarcoma

- Odontogenic sarcoma is a rare tumor, with a reported incidence of less than 10 cases per year. This is the first report of an odontogenic sarcoma with smooth muscle differentiation.

Case report

70-year-old female, with a history of dental extraction, presented with a large, lobulated, pink, fungating mass with foci of ulceration growing out of the extraction site

- Panoramic radiograph: large radiolucent lesion with poorly defined margins in the posterior mandible

Biopsy

Microscope:

- Interspersed among the neoplastic cells were islands of epithelium, some of which exhibited a basaloid appearance, consistent with odontogenic epithelium
- Large areas of necrosis and numerous mitotic figures were observed
- Some high power fields contained 3–4 mitoses

Immunohistochemical studies:

- Spindle and oval-shaped cells
  - Vimentin, alpha smooth muscle actin
  - S100, CD34, CD31, cytokeratin
- Epithelial islands
  - Cytokeratin antibodies
- 20–30% neoplastic cells
  - Ki-67

- Left hemi-mandibulectomy, left submandibular gland, and eight months later, the patient was well.
Discussion

Odontogenic sarcoma with smooth muscle differentiation 優於 odontogenic leimyosarcoma，因為後者暗示是 smooth muscle origin，而非 smooth muscle differentiation of the ectomesenchymal tissue surrounding the odontogenic epithelium

Muller et al. in 1993's review odontogenic sarcoma. 接著 Bregni et al. 定義了 60 個 case 和提出 2 個 new case。現今已有 67 個 cases。

Odontogenic sarcoma

- 男:女 = 39:26
- Maxilla: mandible = 11:37
- 好發年齡: 20~30 y/o
- 年齡: 3 ~ 83 y/o
- 平均年齡: 28.9 y/o
- 來源: ameloblastic fibroma (53.4%) 或原發性 (de novo)

Ameloblastic fibrosarcomas

- Low-grade lesions, rarely metastasize, locally aggressive
- 20% of patients die of locally aggressive disease in 3 months to 19 years due to the high recurrence potential
- Wide-surgical excision with close clinical-follow up

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<tr>
<th>項目</th>
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<tbody>
<tr>
<td>1</td>
<td>下列何者屬於 mixed odontogenic tumor</td>
</tr>
<tr>
<td>(A)</td>
<td>Calcifying epithelial odontogenic tumor</td>
</tr>
<tr>
<td>(B)</td>
<td>Amloblastic fibrosarcoma</td>
</tr>
<tr>
<td>(C)</td>
<td>Odontogenic myxoma</td>
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<tr>
<td>(D)</td>
<td>Cemento-ossifying fibroma</td>
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答案(B)

出處: 1. 1992 WHO classification
2. Oral & maxillofacial pathology, 2nd, p.611

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<tr>
<td>2</td>
<td>下列何者“非”用來鑑別平滑肌細胞的染色劑?</td>
</tr>
<tr>
<td>(A)</td>
<td>smooth muscle actin</td>
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<tr>
<td>(B)</td>
<td>cytokeratin</td>
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<td>(C)</td>
<td>PTAH</td>
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<td>(D)</td>
<td>Masson trichrome stain</td>
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答案(B)

出處: Oral & maxillofacial pathology, 2nd, p.477-8