MALIGNANT TUMOURS OF THE JAWS
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OF THE JAWS

• Squamous cell carcinoma
• Osteogenic sarcoma
• Chondrosarcoma
• Fibrosarcoma
• Malignant lymphomas (incl. Burkitt’s)
• Multiple myeloma
• Ameloblastoma
• Secondary deposits
OSTEOGENIC SARCOMA

- This is a highly malignant tumour which rarely develops in the jaws.
- Usually affects young adults but may occur in the elderly after irradiation.
- The tumour is osteoproliferative with osteoblasts, fibroblasts or cartilage cells seen on histopathological examination.
OSTEOCARTILAGINOUS SARCOMA

• It forms a rapidly growing swelling which may be painful.
• Radiographs show resorption of normal bone with expansion and occasional radio-opacities from bone formation throughout the tumour.
• Metastasis may already be present in the lungs at the time of diagnosis.
• Management is by surgical excision, preceded by radiotherapy.
BURKITT’S LYMPHOMA

• Common in African children 3-12 years of age, but can occur anywhere.
• Epstein-Barr virus may play the role of a vector.
• Multifocal, painless and soft.
• Jaws are affected in the endemic variety. Ileocecal region affected in sporadic variety. May occur in the ovaries and testes.
• Very sensitive to radio-therapy and single dose chemotherapy.
• Spontaneous remissions have been recorded.
AMELOBLASTOMA

• Otherwise known as Adamantinoma.
• An odontogenic tumour, usually arising from epithelial lining of the enamel organ or remnants of the dental lamina.
• 30 to 50 years, coloured races more prone.
• Common in the mandible, molar region.
• Multicystic or solid with cystic degeneration.
• Present for many years, painless. Pushes the outer table.
• Locally invasive. Lymph node involvement and distant metastasis are not common.
AMELOBLASTOMA

• X-rays show multiple large loculi and multiple honeycomb appearance.
• Smaller lesions can be enucleated but larger ones need segmental resection of the mandible.
• These tumours are radio-resistant.
CARCINOMA OF THE MAXILLA

- Carcinoma affecting the upper alveolus or palate is a consequence of oral cancer.
- Tumours at these sites present as a swelling or oral ulceration.
- The treatment is usually surgical excision of part or whole of the maxilla depending on the site, extent and type of tumour.
CARCINOMA OF THE MAXILLA

• Squamous cell carcinoma of the maxillary antrum is a different entity.
• It is the most common malignant tumour of the maxilla (63%) and arises from the mucosal lining of the paranasal sinuses.
• Adenocarcinoma accounts for a further 16%, and various sarcomas, reticuloses and salivary gland tumours are occasionally seen.
• Adenocarcinoma has a predilection for the ethmoid air cells. Wood dust has been confirmed as one aetiological factor.
CARCINOMA OF THE MAXILLA

• Squamous cell carcinoma of the maxillary antrum has a high mortality because of the advanced stage of the disease at first diagnosis.

• Lymph node involvement is uncommon and when present, is an ominous sign. LN involvement is a contraindication for aggressive curative surgery.
CARCINOMA OF THE MAXILLA

• Pain, swelling and nasal obstruction are the usual complaints.

• If there is invasion of the orbit superiorly, proptosis develops. Anterior invasion is associated with infraorbital nerve paraesthesia and medial invasion causes nasal obstruction. Trismus indicates involvement of the pterygoid plates and muscles and has a poor prognosis.
CARCINOMA OF THE MAXILLA

- CT and MRI scans are essential to know the extent of the tumour.
- Biopsy is carried out through the intranasal route as the lateral wall of the nose will always be removed in the subsequent operation.
MULTIPLE MYELOMA

• Highly malignant tumour arising from the Plasma cells within the bone marrow.
• Vertebra, skull and ribs are commonly affected.
• Common after 40 years.
• Patients may present with hypercalcemia and renal failure.
MULTIPLE MYELOMA

• Serum calcium is always elevated
• Serum proteins are raised with reversal of A/G ratio due to increase in the globulin.
• Bence Jones proteins may be found in the urine.
• X-ray shows multiple, clear cut, punched out osteolytic areas without surrounding sclerosis.
• Localised lesions are treated with Radiotherapy
  Generalised lesions respond to Chemotherapy
SECONDARY NEOPLASMS OF THE JAWS

- Metastatic deposits in the jaws usually arise from primary growths in the bronchus, liver, thyroid or kidney.
- The jaws are occasionally the site of the first apparent metastasis but a skeletal survey often shows widespread symptomless secondaries elsewhere.
- Common symptoms are pain and swelling of the gingival tissue overlying the bone.
- Anaesthesia of the lip is often present as the result of sensory nerve involvement at an early stage. Treatment is palliative and symptoms may be relieved by palliative local excision or by radiotherapy.
MAXILLECTOMY

• Weber-Fergusson skin incision is used. This begins in the midline of the upper lip and then, skirting the ala margin, runs upwards along the lateral border of the nose to the medial canthus. It is then continued laterally below the lower eyelid to end over the zygoma.

• A cheek flap is then developed in a supraperiosteal plane by incising the mucosa along the buccal sinus. The periosteum on the floor of the orbit is gently elevated, and a spatula is insinuated between it and the bone to protect the orbital contents.
MAXILLECTOMY

• The ala of the nostril is separated from the bone, and is drawn medially. The nasal process of the maxilla is divided with a chisel at its junction with the nasal bone, the division being continued backwards through lacrimal and ethmoid bones into the inferior orbital fissure.
• The zygoma is severed similarly in the lateral part of the wound.
• The mouth is widely opened and the alveolus and hard palate are divided in the midline with a chisel. The maxilla is finally freed from its bony connections by chiselling through the pterygoid process.
MAXILLECTOMY

• Haemorrhage is arrested by gauze packing.
• The cheek flap is replaced and the wound is closed around the pack.
• An obturator with denture may be fitted when healing is complete.
• Primary reconstruction with microvascular flaps (Delto-pectoral and Pectoralis major myocutaneous flaps) and dental implants is now being practiced.
Aggressive giant cell tumour of mandible
Dentigerous cyst mimicking a neoplasm
X-ray of a case of Osteogenic sarcoma
BURKITT’S LYMPHOMA
Weber-Fergusson incision