Case presentation

FOM Ca

Floor of mouth carcinoma

E. F. Post
Introduction

- Case presentation
- Discussion on Floor of mouth CA
- Discussion on mandibular involvement
Patient details

- 58 yo male
- Complains of: Tender tongue inferiolateral (L)
  Pain when eating
  Decreased tongue movement (L)
  LOW
Patient history

- **ENT**: T2N0M0 FOM Ca (L) 2002
- **Surgery**: Excision Ca ‘02
  - SOND
- **Radiotherapy**: Post surgery ‘02
- **PMHx**: ? OA (shoulders / elbows)
- **Meds**: Ibuprofen, Panado
- **Allergies**: Nil
- **Social**: Smoker 15pack years, cont after 2002
  - Alcohol social
Examination

- Thin 46 kg
- Scar previous SOND
- JACCOL nil. NO pathological nodes palpable
- Mouth edentulous
- FOM mass 2 x 4 cm
  VERY TENDER
  fixation to ventral aspect of tongue
  affecting speech
  unable to assess full extent of infiltration
- ENT otherwise normal
- Systemic NAD
Special investigation

- Bloods: NAD. Hb13
- Panorex: no infiltration of mandible
- CXR: hyperinflated lungs
- ECG: no metastases
- Biopsy: Infiltrating squamous cell carcinoma
Management Plan

- EUA: infiltrate periosteum
  infiltrate cortex partially
  T4N0M0 (recurrence)
- Referals: Dietician
  Social worker
  Dentist – post op. dentures
- X block: Commando – (L)ND – Pec Major Flap
  No radius / fibula free flap (RoRx)
  No radiotherapy
- ICU: monitor airway post operative
Surgery

- Tracheostomy
- Modified Schobinger approach; cheek flap
- Radical neck dissection (L) – take SCM + IJV + N.XI
- Split lip in middle
- Removal of tumor with free edge
- Marginal resection of mandible
- Closure / tongue and buccal mucosa
- Portovac
- Closure of skin
Post operative

- ICU 24 hours: no airway compromise
- Transfused 2 units: Hb 11
- NG feeds: first 4 days
- Portovac: first 7 days
- Trache: remove day 6
- Seroma: G5 2/52 later
  - Ultrasound no haematoma aspirate
- Dental refer: await for dentures
Floor of Mouth Carcinoma

- Oral cavity
- Risk factors
- TNM classification
- Considerations
- Management protocols
- Management options for mandible infiltration
- Complications
- Reconstruction
<table>
<thead>
<tr>
<th>Anatomical sites of oral cavity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buccal mucosa</td>
</tr>
<tr>
<td>Mucosal surface of upper/lower lips</td>
</tr>
<tr>
<td>Mucosal surface of cheeks</td>
</tr>
<tr>
<td>Retromolar areas</td>
</tr>
<tr>
<td>Buccoalveolar sulci, upper, lower</td>
</tr>
<tr>
<td>Alveolus and gingiva</td>
</tr>
<tr>
<td>Upper and lower</td>
</tr>
<tr>
<td>Hard Palate</td>
</tr>
<tr>
<td>Tongue</td>
</tr>
<tr>
<td>Dorsal surface + lateral borders ant. to vallate papillae (ant 2/3)</td>
</tr>
<tr>
<td>Inferior surface</td>
</tr>
<tr>
<td>Floor of mouth</td>
</tr>
</tbody>
</table>
## The incidence of mouth tumours

<table>
<thead>
<tr>
<th>Type of tumour</th>
<th>Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ectodermal</strong></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous benign (mainly neural tumours)</td>
<td>1.0%</td>
</tr>
<tr>
<td>Benign salivary</td>
<td>2.0%</td>
</tr>
<tr>
<td>Squamous carcinoma</td>
<td>85.0%</td>
</tr>
<tr>
<td>(verrucous carcinoma)</td>
<td>5%</td>
</tr>
<tr>
<td>Malignant salivary</td>
<td>5.0%</td>
</tr>
<tr>
<td>Melanoma</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Mesodermal</strong></td>
<td></td>
</tr>
<tr>
<td>Haemangioma</td>
<td>1.5%</td>
</tr>
<tr>
<td>Granular cell myoblastoma</td>
<td>1.0%</td>
</tr>
<tr>
<td>Other benign</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>Malignant</strong></td>
<td></td>
</tr>
<tr>
<td>Non-Hodgkin’s lymphoma</td>
<td>1.0%</td>
</tr>
<tr>
<td>Hodgkin’s lymphoma</td>
<td>0.1%</td>
</tr>
<tr>
<td>Fibrosarcoma</td>
<td>0.5%</td>
</tr>
<tr>
<td>Other sarcomas</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>Metastatic</strong></td>
<td>1.0%</td>
</tr>
<tr>
<td>Site of Carcinoma</td>
<td>Incidence</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Retromolar</td>
<td>2%</td>
</tr>
<tr>
<td>Buccal mucosa</td>
<td>10%</td>
</tr>
<tr>
<td>Tongue</td>
<td>35%</td>
</tr>
<tr>
<td>Lateral border</td>
<td>31%</td>
</tr>
<tr>
<td>Tip</td>
<td>2%</td>
</tr>
<tr>
<td>Dorsum</td>
<td>2%</td>
</tr>
<tr>
<td>Floor of mouth</td>
<td>30%</td>
</tr>
<tr>
<td>Anterior</td>
<td>25%</td>
</tr>
<tr>
<td>Lateral</td>
<td>15%</td>
</tr>
<tr>
<td>Lower alveolus</td>
<td>15%</td>
</tr>
<tr>
<td>Upper alveolus</td>
<td>5%</td>
</tr>
<tr>
<td>Hard palate</td>
<td>3%</td>
</tr>
</tbody>
</table>
Risk factors

1. Smoking Synergistic 1 + 2
2. Alcohol
3. Beetle quid
4. Snuff
5. Rural
6. Low socioeconomics
7. Poor dentitian
8. Textile industries
## TNM classification

<table>
<thead>
<tr>
<th>T:</th>
<th>1° tumour can’t be assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tx</td>
<td>No tumour evidence</td>
</tr>
<tr>
<td>T0</td>
<td>Carcinoma-in-situ</td>
</tr>
<tr>
<td>Tis</td>
<td>&lt; 2cm in greatest dimension</td>
</tr>
<tr>
<td>T1</td>
<td>2 – 4 cm</td>
</tr>
<tr>
<td>T2</td>
<td>&gt; 4 cm</td>
</tr>
<tr>
<td>T3</td>
<td>infiltrate surrounding structures</td>
</tr>
<tr>
<td>T4</td>
<td>e.g. cortical bone, intrinsic tongue mm</td>
</tr>
</tbody>
</table>
TNM classification

N:  Nx  =  Can’t assess regional lymph nodes
    N0  =  No regional lymph nodes
    N1  =  ipsilateral < 3cm single
    N2a =  ipsilateral 3 – 6 cm single
    N2b =  ipsilateral < 6 cm multiple
    N2c =  bilateral / contralateral < 6 cm
    N3  =  Any node > 6 cm

M:  Mx  =  Unable to assess
    M1  =  Metastases present
Considerations

Most anterior, midline – frenulum and just lateral

Infiltration deceptive

Lymph spread to cervical nodes late

Spread to:
- submandibular
  - can go to submental
  - deep cervical chain: jugulo-omohyoid
    - can go to jugulo-digastric
    - can be bilateral
## Pick up mandibular spread

1. **EUA**
   - good feel / clinical NB

2. **Bone Scan**
   - very early
   - also inflammatory process
   - also benign vascular bone tumors

3. **Occlusal (dental) Xray**
   - arch of mandible
   - bone invasion

4. **Panorex**
   - not early spread as in 1.
   - extent of extensive bone invasion
Surgical considerations

NB free margin

Superficial:
Resect - 1° closure or leave open
Transpose Wharton’s duct if near opening

Deeper:
Resect along diaphragmatic muscular plane +
- leave mandible if N mucosa between Ca and Mandible
- marginal mandibulectomy and preserve outer cortex if lesion abuts gingival mucosa
- segmental mandibulectomy if bone / periosteum involved

E:\p558
Surgical approaches

1. Preoral for smaller lesions

2. Cheek flap (lower)

3. Visor flap for anterior FOM
   (-) mental nerve
   (+) not cut lip / cheek

4. Mandibulotomy for posterior FOM
   (-) lingual nerve
   (+) save mental nerve
Surgical approaches to the oral cavity. (a) Pterygoid approach. (b) Mandibulotomy with pan-linigual extension. (c) Lower cheek flap approach. (d) "Visor" flap approach.
Fig. 3-2. Composite resection of advanced floor of the mouth carcinoma.
Mandible

Edentulous  - resorb alveolar process
  - ↓ size
  - ↑ angle (from 110 to 140°)

Marginal resection  - remove partial thickness: alveolar ridge
  anterior ½ ramus
  subdental portion

Segmental resection  - remove entire segment
  - if need to get free margin
  - if periosteal infiltration
Figure 25–26. Marginal mandibulectomy for lesions approximating the gingiva.

Figure 25–27. Segmental mandibulectomy for gross invasion of the mandible.
Other considerations

T1 and T2  
Early Ca  
surgery vs. RoRx same cure  
use single modality

Radiation failure  
go to surgery

Can’t give more than one course because of comorbidity

T3 and T4  
combination Tx: Preoperative RoRx + surgery  
or postop. RoRx = Better (less morbidity)

Recurrence 1/3 5yr after T3- T4  
Consider 2nd primary
Neck dissection

(−) clinical lymphnodes:

i) T2 or >:
Selective neck dissection – supraomohyoidE:
  - modified (spare XI)
  = await histology – RoRx or
  - radical ND

ii) Obese
  Non compliant follow up expected
  Enter neck first to get to tumor:
Elective ND

(+) clinical lymphnodes:
Radical neck dissection; “en bloc”
Extent of node clearance by supraomohyoid neck dissection.
Management

T1
Management

- T2
Management

- T3
Management

- T4
Management options for mandible infiltration
Complications

**Intraoperative:**
1. Major vessel injury
2. Fracture mandible – saw not chiesel; wire
3. Antrostomy

**Immediate post operative:**
1. Hemorrhage – dry; drain; open prn
2. Leak – saliva / blood; suction
Complications

Late:
1. Fistula – wait if not near carotid open / flap if near or if large
2. Osteoradionecrosis
3. Chyle leak - explore
4. Osteomyelitis or non-union - esp if periosteum strip; Abx, I+D, Stabilise
5. Mandible exposure - flap
6. Poor speech - speech therapy; surgery
7. Poor deglution - maxfacial prosthodontist
8. Slough - debride early
Reconstruction

- Skingrafts
- Tongue
- Flaps: cutaneous
  - myocutaneous
  - free