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
  no metastases
- ECG
- 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

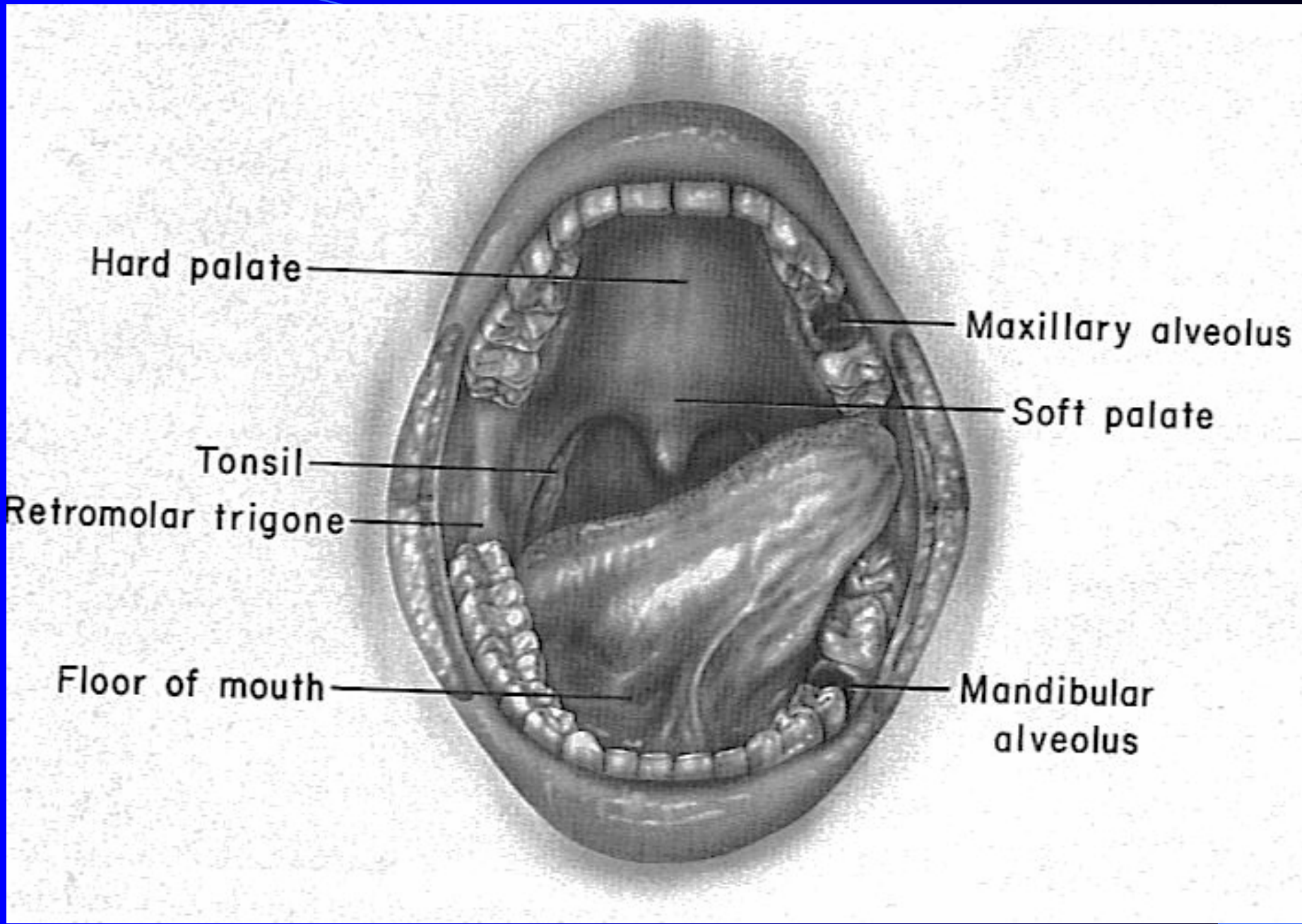
- ICU 24 hours — no airway compromise
- Transfused 2 units — Hb 11
- NG feeds — first 4 days
- Portovac — first 7 days
- Trache — remove day 6
- Seroma — G5 2/52 later
  Ultrasound no haematoma
  aspirate
- Dental refer — await for dentures

Floor of Mouth Carcinoma

- Oral cavity
- Risk factors
- TNM classification
- Considerations
- Management protocols
- Management options for mandible infiltration
- Complications
- Reconstruction

Anatomical sites of oral cavity

Buccal mucosa	Mucosal surface of upper / lower lips
	Mucosal surface of cheeks
	Retromolar areas
	Buccoalveolar sulci, upper, lower
Alveolus and gingiva	Upper and lower
Hard Palate	
Tongue	Dorsal surface + lateral borders ant. to vallate papillae (ant 2/3)
	Inferior surface
Floor of mouth	

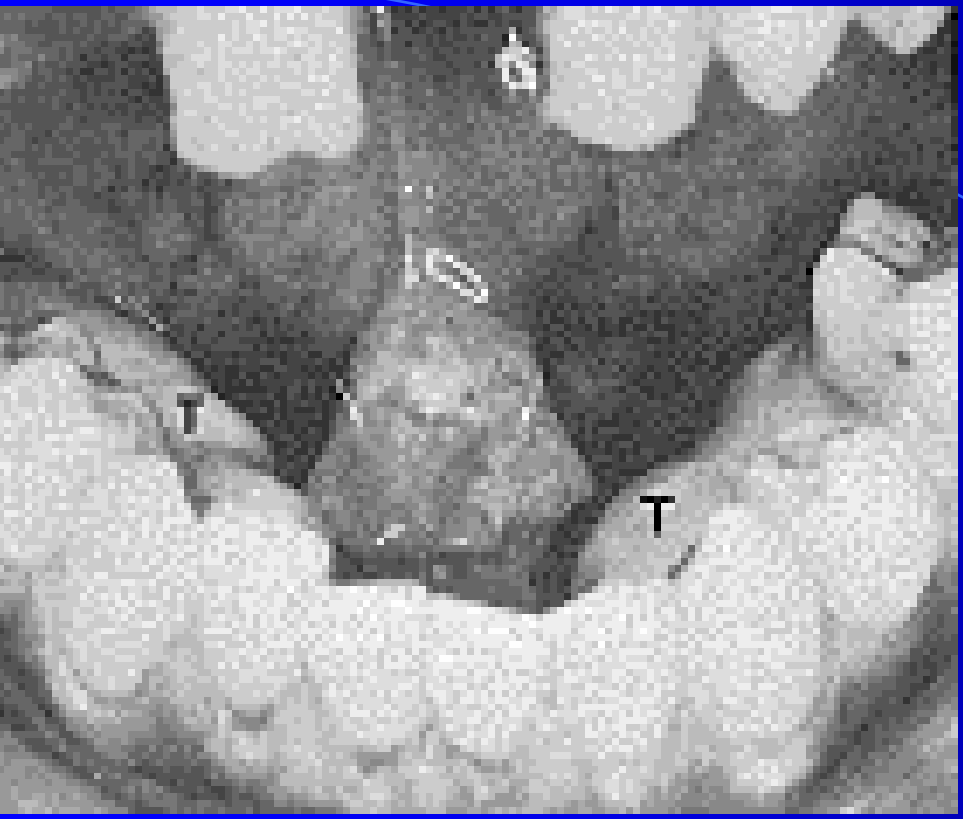

Hard palate
Maxillary alveolus
Soft palate
Tonsil
Retromolar trigone
Floor of mouth
Mandibular alveolus

The incidence of mouth tumours

Type of tumour	*Incidence*
Ectodermal	
Miscellaneous benign (mainly neural tumours)	1.0%
Benign salivary	2.0%
Squamous carcinoma	85.0%
(verrucous carcinoma	5%)
Malignant salivary	5.0%
Melanoma	0.1%
Mesodermal	
Haemangioma	1.5%
Granular cell myoblastoma	1.0%
Other benign	1.0%
Malignant	
Non-Hodgkin's lymphoma	1.0%
Hodgkin's lymphoma	0.1%
Fibrosarcoma	0.5%
Other sarcomas	1.0%
Metastatic	1.0%

Site incidence of oral squamous carcinoma

Site of carcinoma		*Incidence*
Retromolar		2%
Buccal mucosa		10%
Tongue		35%
Lateral border	31%	
Tip	2%	
Dorsum	2%	
Floor of mouth		30%
Anterior	25%	
Lateral	15%	
Lower alveolus		15%
Upper alveolus		5%
Hard palate		3%


T
T

Risk factors

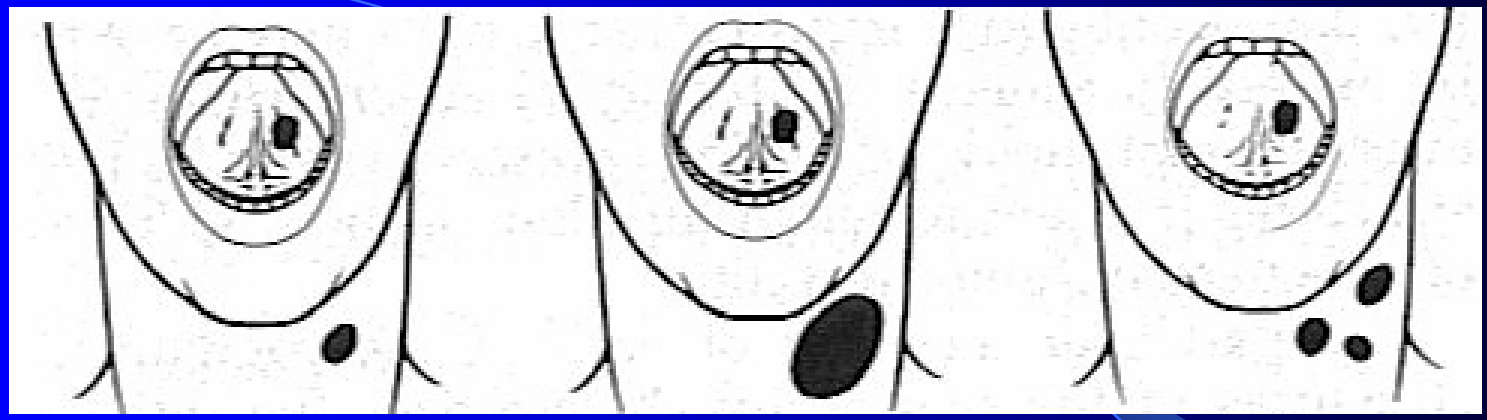
1.Smoking Synergistic 1 + 2
2.Alcohol
3.Beetle quid
4.Snuff
5.Rural
6.Low socioeconomics
7.Poor dentitian
8.Textile industries

TNM classification

- T: Tx = 1° tumour can't be assessed
  T0 = No tumour evidence
  Tis= Carcinoma-in-situ
  T1 = < 2cm in greatest dimension
  T2 = 2 – 4 cm
  T3 = > 4 cm
  T4 = infiltrate surrounding structures
  e.g. cortical bone, intrinsic tongue mm

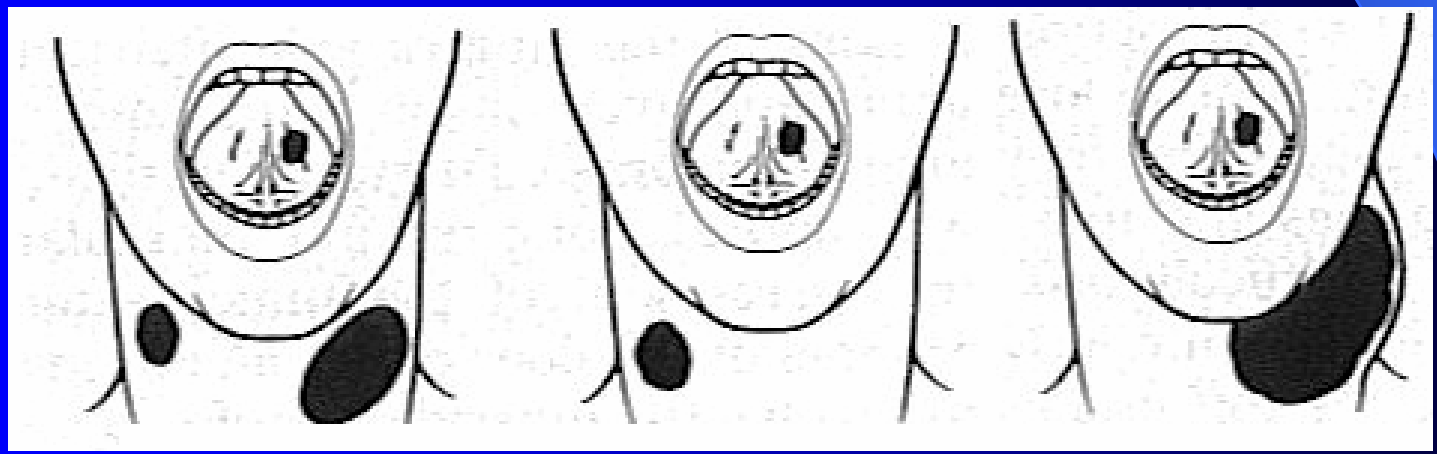
TNM classification

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



N1 N2a N2b

N2c N2c N3



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

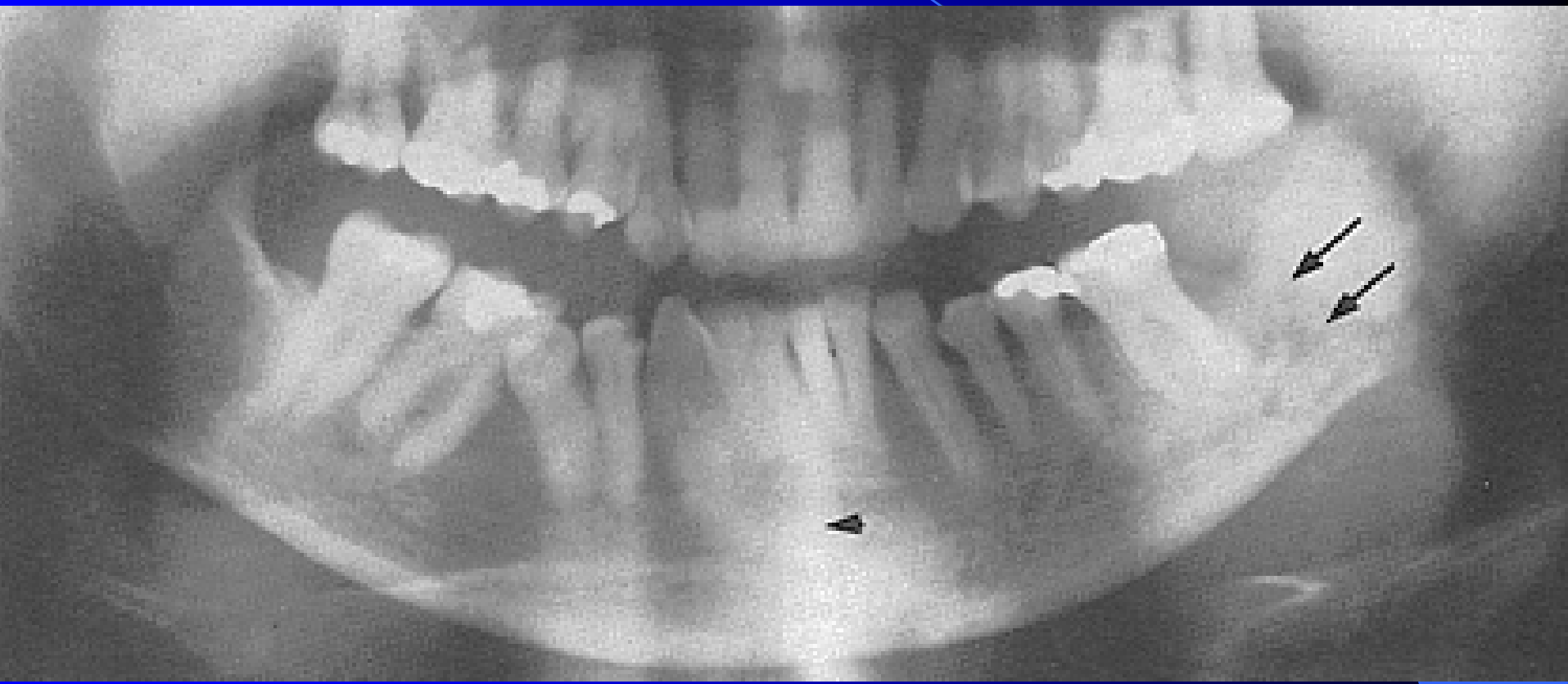
can go to jugulo-digastric

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

Panorex



Occlusal Xray

Surgical considerations

NB free margin

Superficial:

Resect - 1° closure or leave open

Transpose Wharton's duct if near opening

Deeper:

Resect along diaphragmaticmuscular 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

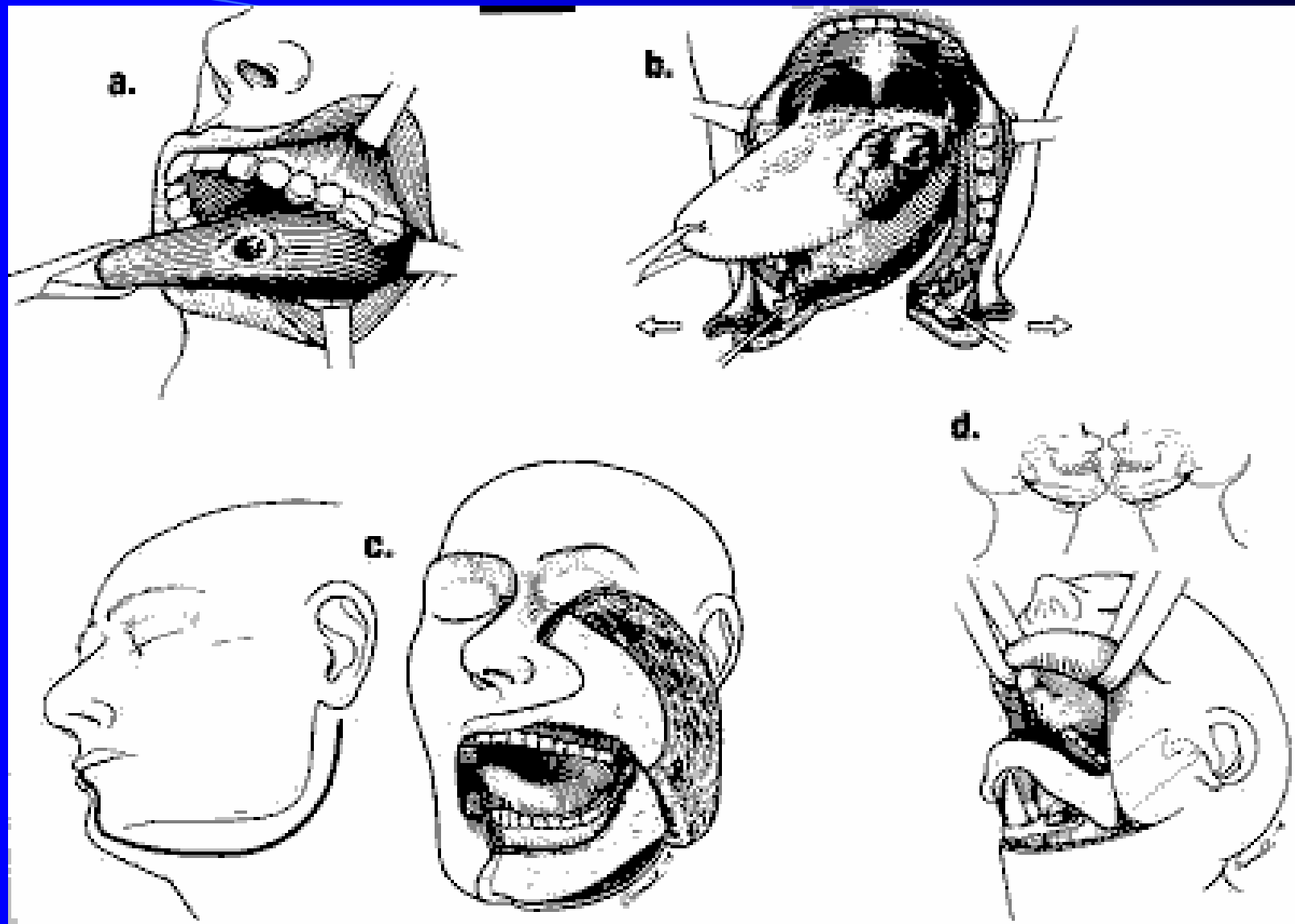
Surgical approaches

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) Perioral approach. (b) Mandibulotomy with paralingual extension. (c) Lower cheek flap approach. (d) "Visor" flap approach.

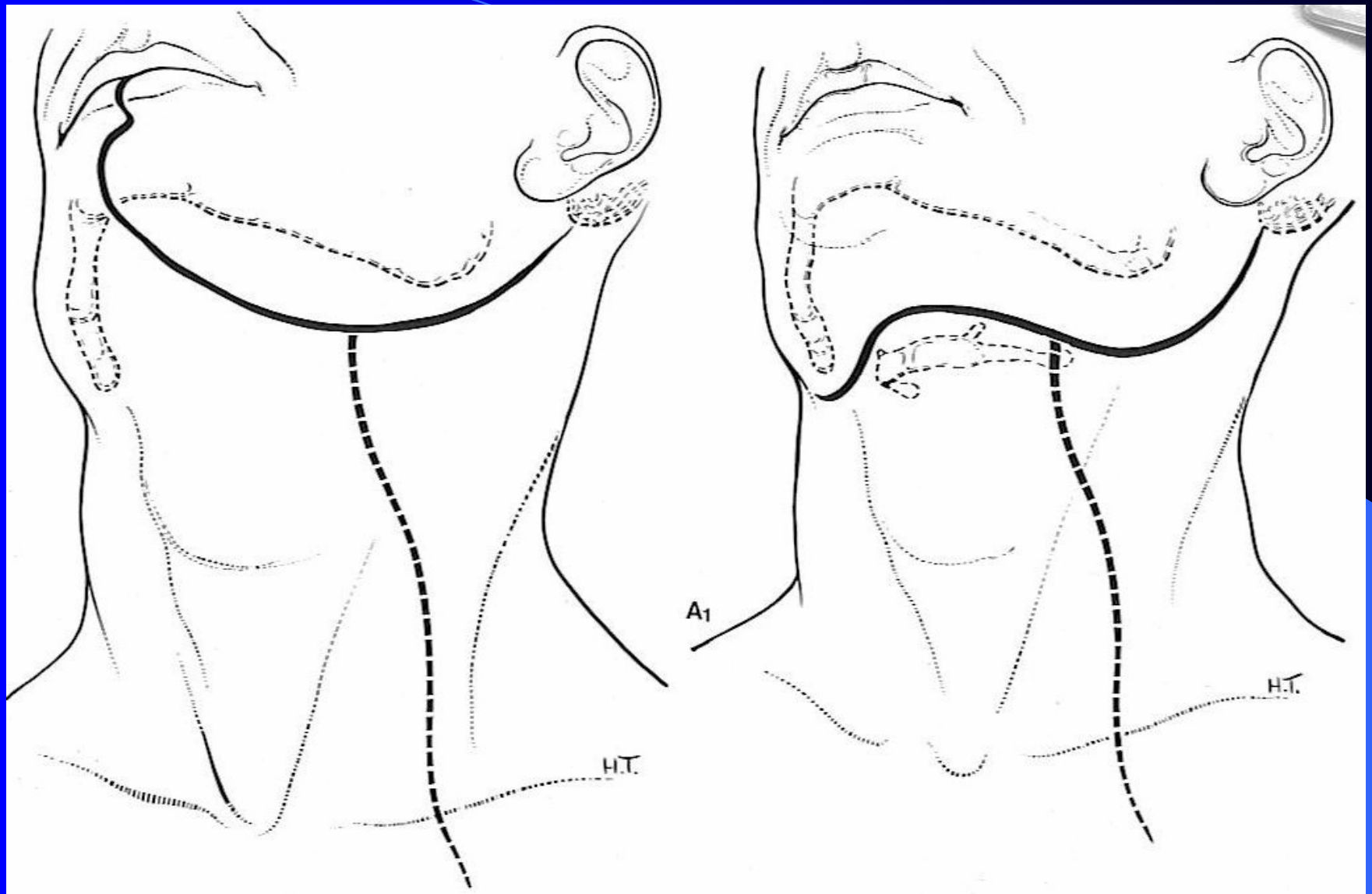


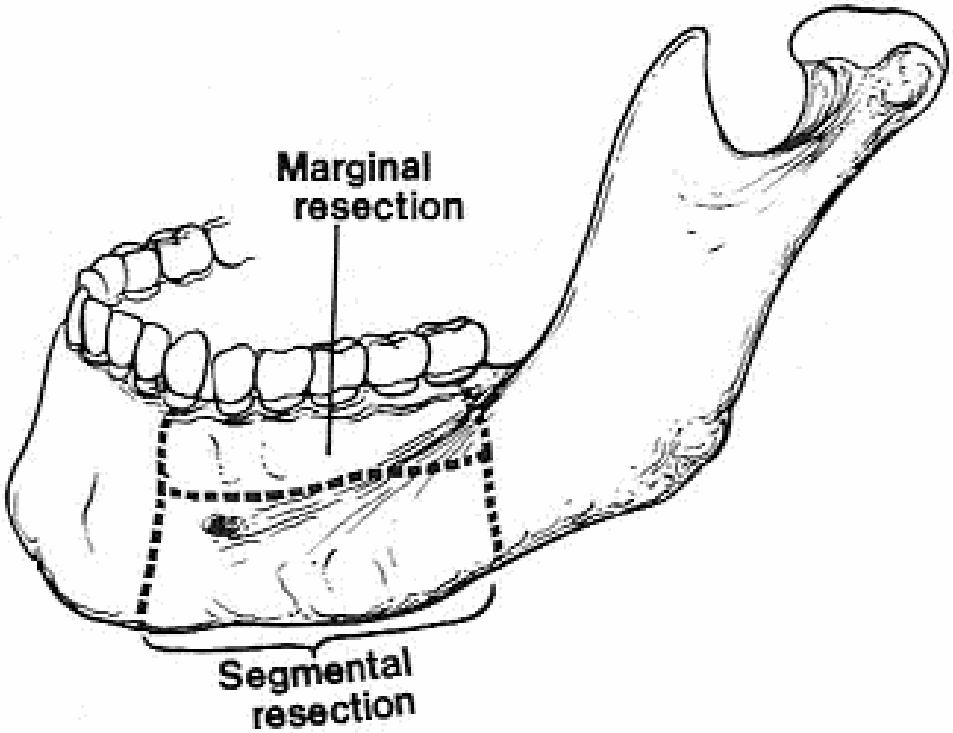
Fig. 3-2. Composite resection of advanced floor of the mouth carcinoma.

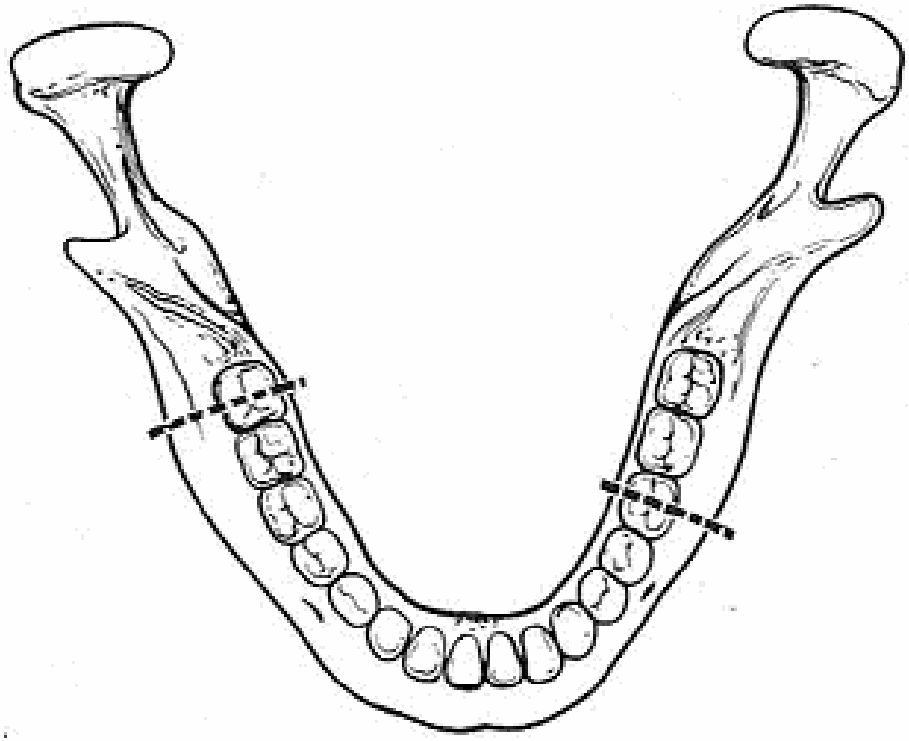
Mandible

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


Marginal
resection
Segmental
resection



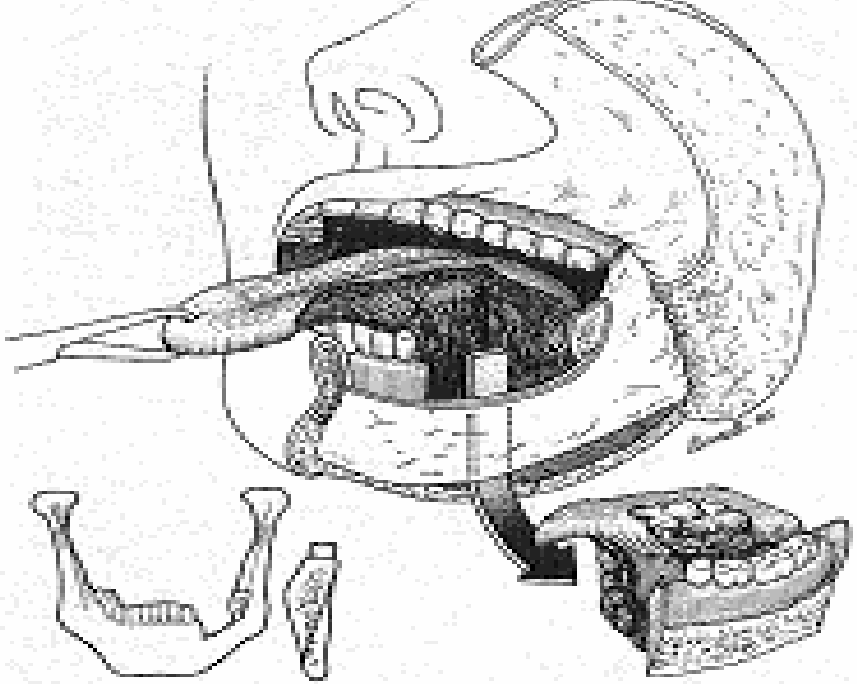


Figure 25–26. Marginal mandibulectomy for lesions approximating the gingiva.

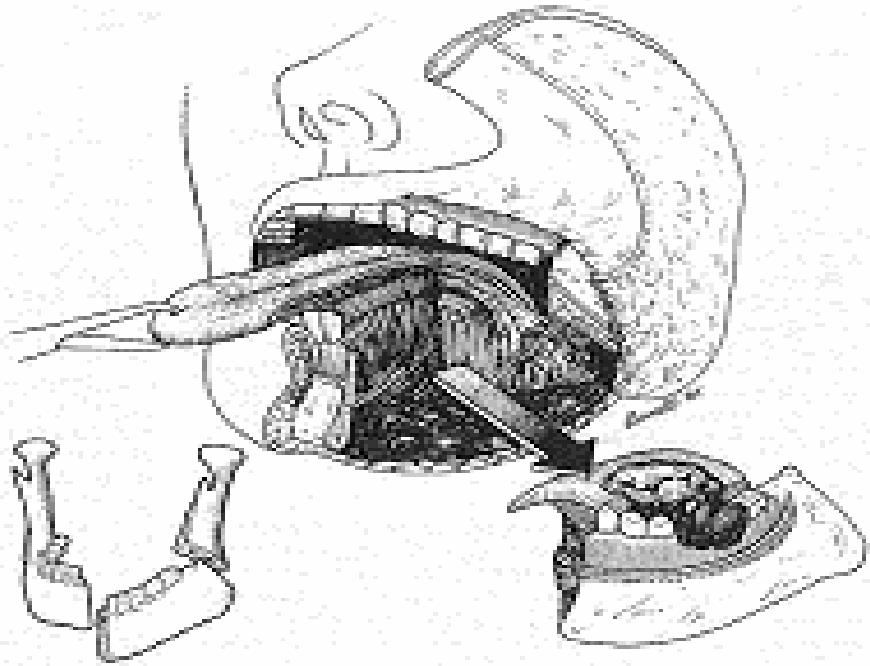


Figure 25–27. Segmental mandibulectomy for gross invasion of the mandible.

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: Preoperarive 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

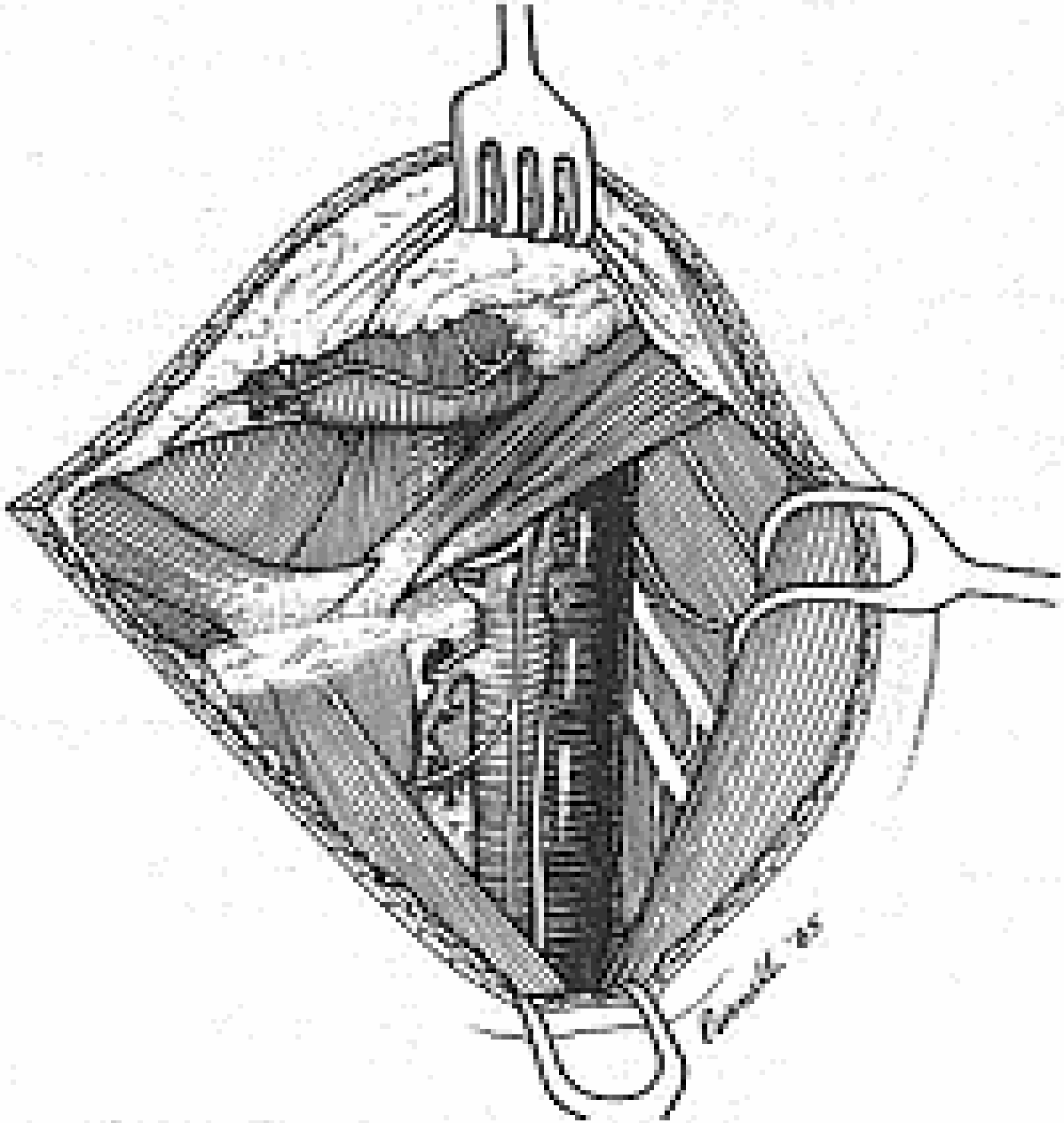
Non compliant follow up expected

Enter neck first to get to tumor:

Elective ND

(+) clinical lymphnodes:

Radical neck dissection; “en bloc”



Extent of node clearance by supraomahyal neck dissection.

Management

- T1

Management

- T2

Management

- T3

Management

- T4

Management options for mandible infiltration

Complications

Intraoperative:

1. Major vessel injury
2. Fracture mamndible – saw not chiesel; wire
3. Antrostomy

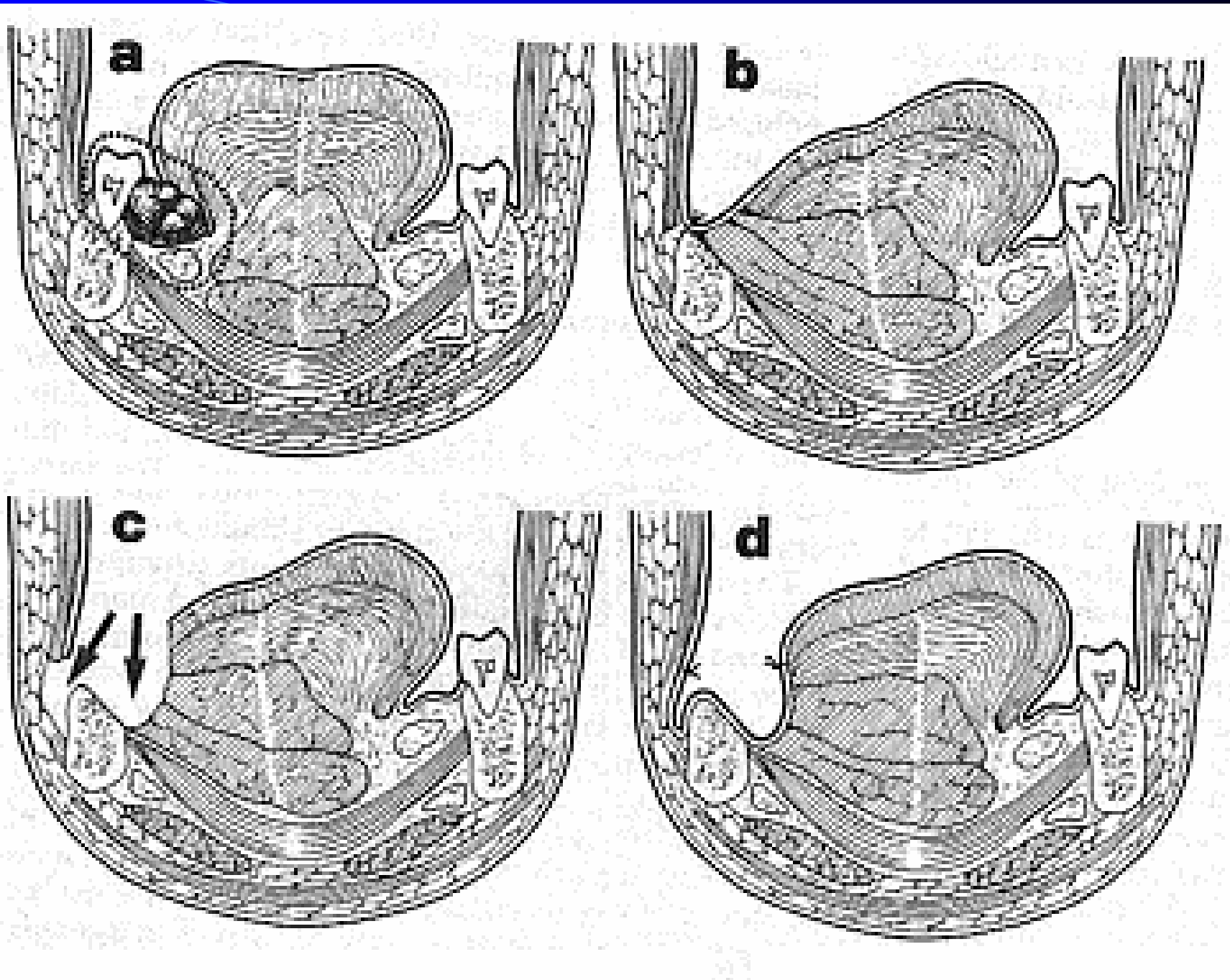
Immediate post operative:

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


a
b
c
d

Reconstruction

- Skingrafts
- Tongue
- Flaps: cutaneous
  myocutaneous
  free