

Chapter 16

Clinical Examinations



Abstract A summary of clinical examinations of the head and neck.

Key Points

- Clinical examination for orthognathic surgery.
- Head and neck examination.
- Examination of cutaneous lesions.
- Examination of salivary glands.
- Examination for facial pain including TMJD.
- Trauma exam.

16.1 Orthognathic

- Position: Clinical Frankfort Plane horizontal to floor/lips at rest.

Lateral View

- Facial 1/3.
- Frontal bossing, nasal shape, nasofrontal, nasolabial, labiomenal, cervicofascial.
- Dorsum/tip of nose.
- Maxilla concave/convex.
- Paranasal hollowing.
- Gross skeletal pattern.

Frontal View

- Facial 1/3: Medial canthus to alar base.
- Facial 1/3: Upper face height/lower face height.
- Brow/tip: Aesthetic lip.
- Contributes—nasal/dental upper and lower/chin point = feel TMJ/check for deviations—asymmetry.
- Upper lip length.
- Incisors show at rest/dynamic.

- Dental centrelines.
- Intraoral examination: OH/incisors (overjet/overbite/openbite), molars, missing/crowding, wisdom teeth.

16.2 Head and Neck Exam

- Firstly, check the primary site, FNE where appropriate.
- FNE
 - Head level.
 - Spray: Lidocaine 5%/Phenylephrine 0.5% Nasal Spray.
 - Focus and white balance.
 - Nasal floor.
 - Soft palate/Eustachian tube.
 - Fossa of Rosenmuller.
 - Posterior wall.
 - Vallecula, vocal cords

Lip compensatory and drooling.

Tongue mobility, speech, swallowing, mastication.

Oral health and radiation caries/mucositis.

Dental status—e.g. problems with denture/obturators.

Mouth opening: Measure with Willis gauge.

Speech intelligible—understood over phone.

Drooling.

Diet—PEG/RIG.

Appearance—facial nerve (MMN).

Sensation—Von Frey filament (nylon).

Weight—malnutrition.

Neck Exam—Primary Drainage Areas

- Under lower border.
- Facial lymph nodes.
- Sternomastoid—fingers.

Shoulder

- Stand behind—abduct to 90°.
- Can they take bra off.
- Comb back of head.
- Hand—radial site.
- Scar—contraction/hypertrophic.
- Skin graft.
- Tendon exposure.

- Loss of sensation over first dorsal interosseous.
- Function: grip/pain.
- Median/ulnar nerve.

Scapula

- Shoulder function.

DCIA

- Sensation cutaneous nerve.

Fibular

- Wound healing.
- Hammer knee—flexor hallucis.
- Sensation—lateral sural cutaneous nerve: posterior/lateral leg gait.
- Foot drop—common peroneal nerve: wasting of anterior tibial and peroneus muscles.
- Pulses—dorsalis pedis.

Look

- Muscle wasting.
- Hair.
- Scar.
- Foot drop.
- Skin graft.

Feel

- Swelling.
- Warmth.
- Tenderness.
- Sensation.
- Pulses—posterior tibial.
- Tendon expose.

Move

- Knee: Joint—flexion/extension.
- Ankle: Plantarflexion/eversion/dorsiflexion.
- Gait: Foot drop.
- Toe: Hammer toe.

New Oral SCC

- Introduction.
- Patient demographics.
- History of lesion—duration/growth/change of colour or pigmentation/bleeding/pain/previous surgery.

QOL Issues

- Speech, swallowing, taste, checking change in nerve sensation—trigeminal.
- Any other lesions of face/head/neck.

Miscellaneous History

- Industrial chemicals.
- Haematological conditions.
- Immunosuppression.
- Head and neck irradiation.

Past Medical History

- Especially with regards to intended surgery.
- Previous surgery—bleeding.
- Pulmonary, cardiovascular fitness, exercise tolerance (claudication/vascular disease).

Social

- Smoking/occupation/alcohol/living circumstances/support.

Clinical Examination—Inspect with Features

- (a) Appearance, location, texture, size (with ruler), proximity to surrounding structures, thickness.
- (b) Trismus—whole oral cavity.
- (c) Head and neck exam/neck nodes.
- (d) FNE.
- (e) Examination around possible donor site.

16.3 Cutaneous Lesion***Introduction***

- Patient demographics.
- Age/occupation.
- History—lesion
 - (a) Duration, growth, change in colour/pigmentation, bleeding, previous surgery on lesion.
 - (b) Any other lesions—head/face/neck/body.
 - (c) Any other lumps/bumps.

History Of

- Sun exposure/sunscreen usage/hat-wearing.

Miscellaneous History

- Related to aetiology—industrial chemicals, hereditary conditions, burns, ulcers, scars, immunosuppression.

PMH

- Previous surgery/bleeding, also with regards to intended surgery.
- Medication: Aspirin/warfarin.

Social History

- Smoking (lip), alcohol, occupation (sun exposure/industrial chemicals), living circumstances, social support.

Family History

- Melanomas, non-melanoma skin cancer, immunosuppression, other cancers in family.

Examination—Wash Hands/Gloves

- Inspection.
- Palpation—determine attachment to underlying structures.
- Examine nerve/vital structures affected—e.g. trigeminal/facial nerve.
- Measure—lesion using ruler.
- Examination.
- Surrounding skin for laxity.
- Head and neck for other lesions.
- Regional nodes.
- Neck/pre- and post-auricular—donor site.

16.4 Salivary Gland

- Patient demographics.
- History of lesion
 - Duration, growth, previous surgery on lesion, pain, infections, swellings with food, previous stone history.
 - Change in sensation—trigeminal nerve.
 - Change in facial movements—facial nerve.
 - Any other lesions in other salivary glands.
- History/PMH/medication, especially xerostomia
 - Antihistamines.
 - Antidepressants.
 - Antihypertensives.

- Social history
 - Smoking/alcohol.
 - Social circumstances.
 - Support.
- Examination
 - Inspection of lesion with description of features
 - Appearance.
 - Location.
 - Texture.
 - Size measured with a ruler.
 - Proximity to surrounding structures.
 - Palpable thickness.
 - Trismus.
 - Comprehensive examination of oral cavity.
 - Bimanual palpation.
 - Examination of nerves or other vital structures that may be affected—e.g. trigeminal, facial, hypoglossal, lingual.
 - Examination of head and neck for other lesions.
 - Examination of regional nodes—systematic examination from level 1–5 and include post auricular nodes.
 - Any masses should be characterized by size, shape, mobility, consistency and proximity to adjacent structures.
 - Include thyroid and parotid glands.

16.5 TMJ/Facial Pain

- Nature of patient's complaints
 - Nature, intensity, location, duration, onset. Aggravating or relieving factors.
 - Other symptoms/parafunction.
 - Headaches, neuralgia, bruxism, clenching, clicks, crepitus, locking, dislocation.
- PMH
 - Arthritis, joint surgery, other chronic pain, facial skeletal surgery, bone pain, IBS etc.
- Medication
 - Pain killers (history of analgesics, antidepressants/benzodiazepines).

- Family/social history
 - Family—children, stress, anxiety, depression.
- Examination
 - (a) Inspection: Abnormal asymmetry.
 - (b) Jaw opening: Maximal (measure), protrusion, lateral excursion.
 - (c) Palpate TMJ: Feel crepitus/clicking.
 - (d) Palpate muscles: Lateral and medial pterygoids, masseters, temporalis, suprahyoid—test power, check accessory muscles (scalp/neck/back).
 - (e) Examine dentition: Occlusion/centric relationship—check canine guidance.
 - (f) Cranial nerves: Auriculotemporal, facial nerves.
 - (g) Otoscopy/auscultation of ear and joints.

Trauma Examination

- Extraoral examination.
- Intraoral examination.

Extraoral examination: Remove and clear debris, photographs, if open fractures cover with betadine soaked dressing, systematic examination.

Systematic Examination:

Skull base and cranial vault: Laceration, contusions, Battle's sign (ecchymosis post auricular/astoid region), open/depressed skull fractures.

Midface

- Eyes: Pupil (size, reaction), visual acuity, eye movement, circumorbital oedema, subconjunctival haemorrhage, proptosis, dystopia/globe position (Hertel exophthalmometer), laceration of eye lid, corneal abrasions.
- Ear: Laceration, bleeding, otorrhoea, haematoma of auricular cartilage.
- Pain/swelling medial canthal region: check for depression, intercanthal distance, check for NOE fracture.
- Bony deformity: Zygomatic arch/body, infraorbital rim, infraorbital hypoesthesia, check for Le fort fractures.
- Nose: Shape, nose bleed, rhinorrhoea (halo sign/beta-transferrin), septal haematoma, air entry.

Mandible: Look for asymmetry, deviation, dislocation, trismus, reduced jaw movement, ecchymosis, laceration. Palpate over TMJ region.

Dental alveolar and intraoral examination: Malocclusion, loss of dentition, laceration, ecchymosis, mobile mandibular and maxillary segments, position of the tongue.

Le Fort Fractures:

- Le Fort I: Only maxillary movement.
- Le Fort II: Movement maxilla & base of nose.
- Le Fort III: Movement of midface.