Subspecialization in Pediatric Otorhinolaryngology
INTRODUCTION

The UEMS-ORL Section and Board of Otorhinolaryngology-Head and Neck Surgery have developed six subspecialty programmes. After finishing their specialty programme in Otorhinolaryngology - Head & Neck surgery, otorhinolaryngologists can attend subspecialty programmes. One of these is the Pediatric otorhinolaryngology programme. This programme will serve as a guideline for training centres, enabling them to meet the European Standard as set out by the European Board of UEMS through competency based assessments.

DEFINITION

Pediatric otorhinolaryngology (PORL) has become a recognized subspecialty within Otorhinolaryngology-Head and Neck Surgery (ORL-HNS). PORL deals with functions and diseases, trauma, malformations and other disorders in childhood, encompassing the anatomical structures of the ear, temporal bone and lateral skull base, nose, paranasal sinuses and anterior skull base, oral cavity, pharynx, larynx, trachea, oesophagus, head, neck, thyroid, salivary and lacrimal glands and adjacent structures. It also includes investigation and treatment of conditions affecting the auditory, vestibular, olfactory and gustatory senses and disorders of the cranial nerves; as well as human communication in respect of speech, language and voice disorders. Some of the conditions are diagnosed by the Otorhinolaryngologists but located in adjoining areas and require close cooperation with related specialists.
PORL subspecialty is ORL-HNS in its entirety, applied in children. Caring for children with ear, nose and throat problems is becoming more and more complex. Because of that, PORL subspecialty is divided into four sections: Pediatric Otology, Pediatric Rhinology and Facial Plastics, Pediatric Laryngology and Phoniatrics and Pediatric Head and Neck Surgery. These sections could be called super specialities within the pediatric ORL subspeciality. Any trainee must attain general competency level in the entire PORL subspecialty area, and advanced competency levels in his/her chosen super-specialty. Trainees will choose one of the super specialty programmes and after finishing this programme, will become subspecialists in PORL, with an additional super-specialist degree in Pediatric Otology, Pediatric Rhinology and Facial Plastics, Pediatric Laryngology and Phoniatrics or Pediatric Head and Neck Surgery.

Trainee Eligibility

• Registered ENT-specialist with a minimum of 5 years exposure to general ENT practice.
• Competitive process
• Candidate must show interest

Program Director Requirements

• Acknowledged expert in the field
• 10 years of professional experience
• Academic position or equal competence
• Appointed by appropriate administration

Institutional Requirements

• Sufficient exposure to Pediatric Otorhinolaryngology
• At least two active pediatric ENT surgeons
• Intensive care unit
• Approved by visitation
• Centralisation would promote training of a high standard

Resources

• Accreditation is primary goal, then funding application

Training program

• Participation in at least 1 scientific peer-reviewed publication
• Ample time for compulsory study: nominated journals, text books, courses, congresses etc.
• Evaluation of competence by theoretic (European) written exam and clinical judgement by program director and appropriate national body
• Visitation/CPD
• Regular visitation of training center and program of entire process according to the charter of visitation of the training centers
• Periodic re-evaluation of CME/CPDE on a 5-year basis

Proposed evaluation levels:

General competency level
  A: The trainee assists the trainer during the procedure/management
S: The trainee requires supervision/assistance by trainer while he/she performs the procedure/management

**Advanced competency level**
I: The trainee performs the procedure/management independently/alone (trainer available)

- **FUNDAMENTAL KNOWLEDGE REQUIRED IN**
  1. Emergency medicine and resuscitation
  2. Infection control
  3. Antimicrobial therapy
  4. Transfusion medicine/blood grouping/cross-matching etc.
  5. Haemostasis
  6. Oncology
  7. Wound healing
  8. General surgical techniques
  9. Basic principles of plastic and reconstructive surgery
  10. Transplantation medicine
  11. Soft tissue and bone traumatology
  12. Immunology
  13. Endocrinology
  14. Oral and parenteral nutrition
  15. Basic psychosomatic investigation/management
  16. Radiation protection
  17. Medical quality control
  18. Ethical principles/informed consent
  19. Social welfare legislation
  20. Basic nutritional medicine
  21. Basic laboratory procedures
  22. Basic laboratory investigations: indication, correct taking and handling of samples and interpretation of the results
  23. Normal blood values
  24. Bacteriology/mycology
  25. Principal detection of fungi (cell culture)
  26. Antimicrobial medication
  27. Analysis of tumour-markers
  28. Allergology laboratory investigations
  29. Genetics, and syndromes affecting head and neck
  30. Complex radiographic studies (MRI, CT, angiograms)

**A. OTOTOLOGY Diagnostics**

1. **Clinical examination**
   a) Otoscopy
   b) Endoscopy
   c) Microscopy

2. **Interpretation of relevant imaging**
   a) Ultrasound scan, plain X-Ray, CT, MRI, PET

3. **Hearing function**
   a) Hearing distance test
   b) Tuning fork tests
   c) Impedance audiometry
   d) Pure tone audiometry
e) Speech audiometry
f) Supraliminal audiometry
g) Objective hearing test
   i. evoked response audiometry (ERA,BERA)
   ii. oto-acoustic emissions (OAE)
h) Paediatric audiology
   i. screening methods
   ii. objective methods
   iii. subjective methods

4. Vestibular function
   a) Spontaneous nystagmus
   b) Induced nystagmus
      i. positional nystagmus
      ii. caloric testing
c) Electronystagmography
d) Rotating chair test
e) Spinal reflexes (Unterberger, Romberg)
f) Posturography
g) Videonystagmography

5. Facial nerve function
   a) Topodiagnostic testing
      i. e.g. Schirmer’s test, gustatory tests, stapedial reflex
   b) Neurophysiological testing
      i. nerve stimulation tests (e.g. MST, NMG (ENoG), TFR ...)
      ii. electromyography

6. Non-surgical management
   a) Pharmacological treatment and/or physical rehabilitation
   b) Ear infection
   c) Sensorineural deafness
   d) Tinnitus
   e) Vertigo and disequilibrium
   f) Facial nerve paresis / paralysis
   g) Post-op care

**OTOLOGY Management/Treatment**

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<th>GENERAL</th>
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a. Otitis Media/Cholesteatoma

i. Evaluate and treat a child with serious and acute otitis media.

1. Understand medical and surgical therapy, antibiotic resistance, and the role of vaccination.

ii. Evaluate and treat a child with chronic otitis media with or without cholesteatoma.

1. Proficient micro-otoscopy, audiometric evaluation, radiological interpretation (X-Ray, MSCT, MRI, Angiography)

2. Medical and Surgical management including ossicular reconstruction, canal wall up and canal wall down mastoidectomies
b. Evaluate, identify, and manage complications of chronic otitis media, both intra and extra cranial. Learn to work in conjunction with the neurosurgeon and infectious disease services.

c. Sensorineural Hearing Loss
   i. Evaluate and treat a child with SNHL.
      1. Work-up (history, physical exam, imaging and laboratory testing as indicated)
      2. Referral for hearing aid placement (including bone anchored hearing aids) and FM auditory systems
      3. Surgical proficiency including BAHA and CI cases.

d. Facial Nerve Palsy/Paralysis
   i. Evaluate and treat a child with facial nerve palsy/paralysis
      1. Work-up (history, physical exam, imaging and laboratory testing as indicated)

   MEASUREMENT:
      1. Documentation of the above.
      2. Attending evaluations from Hearing Impaired Clinic.

d. Vertigo
   i. Evaluate and treat a child with vertigo
      1. Differential diagnosis and work-up

   MEASUREMENT:
      1. Attending evaluations from Hearing Impaired Clinic.
      2. Documentation of the above.
      3. Round lists

OTOLGY surgical treatment log

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<td>1. Temporal bone dissections (lab.)</td>
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<td>1. Otoplasty</td>
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<td>2. Management of oto-haematoma</td>
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<td>3. Removal of osteomas</td>
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<td>4. Myringoplasty</td>
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<td>5. Tympanotomy</td>
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<td>6. Mastoidectomy</td>
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<td>a. Simple</td>
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<td>b. Modified</td>
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<td>c. Radical</td>
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<td>7. Antrotomy</td>
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<td>8. Meatoplasty</td>
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<td>9. Foreign body removal</td>
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<td>10. Removal of auditory meatus polyps</td>
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<td>11. Myringotomy</td>
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<td>12. Myringotomy with ventilation tube insertion</td>
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</table>
### 13. Tympanoplasty (reconstruction of ossicles)

### 14. Implantation of prostheses
   - a. Middle ear prosthesis
   - b. Bone anchored hearing aids
   - c. Cochlear implants

### 15. Stapedectomy / stapedotomy

### 16. Saccotomy

### 17. Neurectomy (vestibular nerve section)

### 18. Acoustic neurinoma surgery

### 19. Facial nerve surgery
   - a. Decompression
   - b. Grafting
   - c. Monitoring

### 20. Glomus tumour surgery

### 21. Petrosectomy

### 22. Skull base surgery (otobasis) with reconstruction

#### SURGICAL MANAGEMENT OF CONGENITAL AND ACQUIRED MALFORMATIONS

### 23. Auricle
### 24. Fistulas
### 25. Outer ear canal
### 26. Middle ear

#### REPAIR OF INJURIES

### 27. Auricle
### 28. Outer ear canal
### 29. Middle and inner ear including nerves, vessels and dura of the temporal bone compartment

#### TUMOUR SURGERY

### 30. Auricle
### 31. Outer ear canal
### 32. Middle and inner ear including nerves, vessels and dura of the temporal bone compartment

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### B. LARYNGOLOGY and FONIATRICS Diagnostics

#### 1. Clinical examination
   - a) Indirect mirror laryngoscopy
   - b) Flexible endoscopic examination of larynx, trachea, bronchi, with or without washings for cytology
   - c) Stroboscopy
   - d) Direct laryngoscopy with or without swabs for microbiological assessment
   - e) Microlaryngoscopy
   - f) Endolaryngeal, endotracheal and endobronchial biopsy

#### 2. Interpretation of relevant imaging
a) Ultrasound scan, plain X-Ray, CT, MRI, PET

3. **Non-surgical management**

a) Techniques in voice analysis  
b) Electromyography  
c) Care of the professional voice  
d) Voice restoration following laryngectomy/ total laryngectomy (care of the valve prosthesis)  
e) Medical management of laryngotracheal disease

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### LARYNGOLOGY and FONIATRICS Management/Treatment

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#### a. Stridor

i. Evaluate neonate diagnosis and management of the neonate or child with stridor or extubation problems.

ii. Diagnose and manage conditions such as congenital and acquired laryngotracheal disorders, obstructive sleep apnea, foreign body, and airway trauma.

**MEASUREMENT:**

1. Documentation of urgent and/or difficult intubations in the hospital.
2. Documentation of surgical cases to evaluate and treat these children.
3. Attending evaluations from Airway Clinic.
4. Rounds lists

#### b. Complex airway compromise

i. Understand complex airway pathologies, including mastery of the medical and surgical management of these.

ii. Feel proficient and confident in securing a tracheotomy in the neonate.

iii. Feel comfortable counseling families on the alternative forms of management of complex airway pathologies

**MEASUREMENT:**

1. Documentation of neonatal tracheotomies.
2. Documentation of surgical cases to evaluate and treat these children, both through an open and endoscopic approach.
3. Attending evaluations from Airway Clinic.

#### c. Voice

i. Manage a child with a voice disorder such as hoarseness, demonstrating mastery of the differential diagnosis, office endoscopic assessment and medical and surgical treatment.

1. Able to work closely with a speech and language pathologist in the evaluation of these children.

**MEASUREMENT:**

1. Documentation of surgical cases to evaluate and treat these children.
2. Attending evaluations from Voice Clinic.
## LARYNGOLOGY and FONIA TRICS surgical treatment log

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1. **Removal of foreign bodies from larynx, trachea and bronchi**
   a. Recognition of the clinical features of foreign bodies in the ear nose and throat
   b. Recognition of the clinical signs of respiratory distress in children
   c. Emergency airway care in conjunction with anaesthetists and paediatricians.

2. **Endotracheal intubation**

3. **Closure of tracheostome**

4. **Incision of crico-thyroid membrane**

5. **Endolaryngeal, endotracheal and bronchial laser surgery**

6. **Surgery for unilateral cord palsy**

7. **Surgery for bilateral cord palsy**

8. **Phonosurgery (surgery for voice and speech)**
   a. Frame work surgery (thyroplasty)
   b. Vocal cord augmentation
   c. Botulinus toxin injection

9. **Management of blunt and open laryngo-tracheal injury**

### SURGERY FOR LARYNGEAL TRACHEAL NEOPLASMS

10. **Endolaryngeal surgery for tumors**

11. **Endolaryngeal laser surgery for tumours in the upper aerodigestive tract**

12. **Techniques for insertion of valves for voice rehabilitation**

13. **Management of laryngo-tracheal stenosis**

14. **Tracheal and bronchial stenting**

15. **Repair of tracheo-oesophageal fistulas**

### SURGICAL MANAGEMENT OF CONGENITAL AND ACQUIRED MALFORMATIONS

16. **Supraglottic stenosis**

17. **Laryngeal web**

18. **Subglottic haemangioma**

19. **Vocal cord paralysis**

20. **Laryngeal cleft**

21. **Vascular compression**

22. **Tracheal stenosis**

23. **Inhalational injury**

24. **Laryngeal papilloma**

### C. RHINOLOGY and FACIAL PLASTIC Diagnostics

1. **Clinical examination**
a. Assessment and ethnic variation  
b. Aesthetic proportions of the face  
c. Development of the cranial bones  
d. Anterior and posterior rhinoscopy  
e. Endoscopy  
f. Microscopy  
g. Photography

2. Interpretation of relevant imaging  
   a) Ultrasound scan, plain X-Ray, CT, MRI, PET

3. Functional testing  
   a) Rhinomanometry  
   b) Acoustic rhinometry  
   c) Olfactory tests (subjective, objective)  
   d) Ciliary function tests

4. Allergy investigations  
   a) Epicutaneous allergen tests  
   b) Intracutaneous allergen tests (Prick, Scratch)  
   c) Nasal provocation tests  
   d) Nasal cytology  
   e) Eliminative tests  
   f) Interpretation of serological tests (RAST, IgE)

5. Non-surgical management  
   a) Pharmacological therapy  
   b) Specific immunotherapy (hyposensitization)  
   c) Anaphylaxis reaction therapy

**RHINOLOGY and FACIAL PLASTIC Management/Treatment**

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**a. Rhinosinusitis**  
   i. Demonstrate ability to medically and surgically manage pediatric rhinosinusitis, including pediatric functional endoscopic sinus surgery.  
   ii. Ability to council families as to the management options of pediatric rhinosinusitis.  
   iii. Understand association with chronic pulmonary diseases.  

**MEASUREMENT**  
1. Documentation of the above, including surgical cases.  
2. Attending evaluations from ENT clinics.

**b. Suppurative complications of Rhinosinusitis**  
   i. Able to recognize and treat the complications (both intra and extra-cranial) of sinusitis, including open and endoscopic approaches.  
   ii. Able to work closely with other specialists such as the neurosurgeon, ophthalmologist, etc.  

**MEASUREMENT:**
1. Documentation of the above, including surgical cases.
2. Attending evaluations from ENT clinics.
3. Rounds lists.

**RHINOLOGY and FACIAL PLASTIC surgical treatment log**

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<td>1.</td>
<td>Control of nasal epistaxis</td>
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<td>a. Nasal packing</td>
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<td>b. Nasal cautery</td>
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<td>2.</td>
<td>Foreign body removal</td>
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<td>3.</td>
<td>Nasal polypectomy</td>
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<td>4.</td>
<td>Turbinate surgery</td>
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<td>5.</td>
<td>Reposition of nasal fractures</td>
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<td>6.</td>
<td>Incising abscesses</td>
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<td>7.</td>
<td>Septal surgery</td>
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<td>Revision septrhino</td>
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<td>9.</td>
<td>Septum perforation repair</td>
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<td>10.</td>
<td>Closed rhinoplasty</td>
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<td>11.</td>
<td>Complicated rhinoplasty</td>
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<td>Open rhinoplasty</td>
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<td>13.</td>
<td>Revision rhinoplasty</td>
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<td>14.</td>
<td>Augmentation rhinoplasty</td>
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<td>15.</td>
<td>Cleft patient rhinoplasty</td>
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<td>16.</td>
<td>Reduction rhinoplasty</td>
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<td>17.</td>
<td>Correction of malformations (e.g. choanal atresia, fistulas, dermoids, etc.)</td>
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<td>18.</td>
<td>Management of immediate post-operative complications</td>
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<td>19.</td>
<td>Sinus endoscopy</td>
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<td>20.</td>
<td>Antral lavage</td>
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<td>21.</td>
<td>Endoscopic antrostomy</td>
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<td>22.</td>
<td>Radical antrostomy (Caldwell-Luc)</td>
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<td>23.</td>
<td>Frontal sinus trepanation</td>
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<td>24.</td>
<td>External frontal sinus surgery</td>
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<td>25.</td>
<td>External ethmoidectomy</td>
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<td>26.</td>
<td>Endonasal ethmoidectomy (endoscopic, microscopic)</td>
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<td>27.</td>
<td>Fronto-ethmoidectomy (endoscopic)</td>
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<td>28.</td>
<td>Sphenoid sinus surgery</td>
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<td>29.</td>
<td>Revision paranasal sinuses operation</td>
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<td>30.</td>
<td>Closure of oro-antral fistula</td>
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<td>31.</td>
<td>Ligation of maxillary or ethmoidal artery</td>
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<td>32.</td>
<td>Orbital decompression procedures</td>
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<td>33.</td>
<td>Dacryo-cysto-rhinostomy</td>
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### TUMOUR SURGERY

35. Maxillectomy (partial, total)
36. Lateral rhinotomy
37. Midfacial degloving
38. Combined approach to the anterior skull base
39. Orbitotomy
40. Exenteration of orbit
41. Surgery of the anterior skull base (incl. osteoplastic flap, dura plasty and related techniques)

### REPAIR OF INJURIES (TRAUMATOLOGY)

42. Soft tissue injuries
43. Nasal fractures
44. Septal haematoma
45. Paranasal sinus fractures
46. Fractures of orbit including blow out fracture
47. Fractures of zygoma
48. Optic nerve decompression
49. Reconstruction of the anterior skull base

### PLASTIC AND RECONSTRUCTIVE SURGERY

50. Limited regional sliding and rotation flaps
51. Free skin grafts
52. Extensive plastic reconstruction
   a. Myofascial flaps
   b. Myocutaneous flaps
   c. Microvascular flaps
53. Bone replacement
54. Cartilage replacement
55. Otoplasty
56. Genioplasty
57. Facial resurfacing
58. Injectable and implantable materials for rhytids / lip augmentation
59. Genioplasty / mentoplasty

### D. HEAD and NECK Diagnostics

1. Clinical examination
   a) Inspection and palpation of oral cavity and oropharynx, larynx, hypopharynx, oesophagus and the neck
   b) Endoscopic assessment of oral cavity, pharynx, larynx and oesophagus with flexible and rigid endoscopes, including biopsies, preparation of swabs, washings, and related techniques
   c) Gustometry
   d) Functional tests of salivary glands
2. Interpretation of relevant imaging

a) Ultrasound scan, conventional X-Ray, OPG, CT, MSCT, MRI, PET, SPECT esophagogram
b) Diagnosis and interpretation of swallowing disorders including reflux

3. Non-surgical Management

a) Pharmacological therapy
b) Swallowing and aspiration rehabilitation
c) Non-surgical treatment of sleep apnoea and roncopathy
d) Conservative treatment of wounds
e) Chemo-radiation-therapy
f) Application of botulinum toxin
g) Treatment planning

HEAD and NECK Management/Treatment

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<td>a. Adenotonsillar diseases</td>
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<tr>
<td>i. Understand the pathophysiology (including neurobehavioral and cardiovascular sequelae), evaluation and medical/surgical management of pediatric sleep apnea including in complex patients with neuromuscular disorders and hypotonia.</td>
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<td>ii. Comprehend the pathophysiology and treatment of acute and chronic infectious adenotonsillar disease.</td>
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<td>MEASUREMENT:</td>
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<tr>
<td>1. Documentation of the above, including surgical cases.</td>
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<td>2. Attending evaluations from ENT clinics.</td>
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b. Velopharyngeal Insufficiency

i. Manage a child with congenital or acquired velopharyngeal insufficiency demonstrating knowledge and comprehension of associated etiologies including velocardiofacial syndrome.

ii. Demonstrate capability of performing and understanding the office nasopharyngoscopic assessment and medical (speech therapy) and surgical (pharyngeal flap, sphincteroplasty) treatment.

iii. Able to work closely with the speech and language pathologist in the evaluation and management of these children.

MEASUREMENT:

1. Documentation of surgical cases to treat these children. | x |
2. Attending evaluations from VPI Clinic. | x |

c. Swallowing
i. Be able to direct the investigation into a child’s feeding/swallowing disorder including history/physical, appropriate laboratory and radiographic studies, and endoscopy.

ii. Comprehend the management, both medical and surgical, of drooling in children including those with neuromuscular and developmental disorders.

**MEASUREMENT:**

| 1. Documentation of the above, including surgical cases. | x |
| 2. Attending evaluations from ENT clinics. | x |
| 3. Attending evaluation from Oro- and Swallowing clinic. | x |

**d. Congenital**

i. Comprehensive understanding of the embryology and anatomy of the head and neck.

ii. Know the differential diagnosis of these lesions, appropriate peri-operative studies and medical and surgical treatment.

iii. Demonstrate proficiency in the surgical excision of these.

**MEASUREMENT:**

| 1. Documentation of the above, including surgical cases. | x |
| 2. Attending evaluations from ENT clinics. | x |
| 3. Rounds lists | x |

**e. Inflammatory**

i. Comprehend the pertinent aspects of history, physical examination, laboratory and imaging studies prior to appropriate medical and/or surgical treatment.

ii. Able to work closely with other specialists including infectious diseases.

**MEASUREMENT:**

| 1. Documentation of the above, including surgical cases. | x |
| 2. Rounds lists. | x |
| 3. Attending evaluations. | x |

**f. Neoplastic**

i. Be knowledgeable of the differential diagnosis, physical examination, endoscopy (as needed), radiographic, and laboratory studies necessary to come up with an accurate differential diagnosis.

ii. Understand surgical management, including the role of needle cytology, incisional or excisional biopsies.

iii. Be familiar with the multi-disciplinary approach necessary for the management of these lesions.

**MEASUREMENT:**

| 1. Documentation of the above, including surgical cases. | x |
| 2. Rounds lists | x |
| 3. Attending evaluations. | x |

**HEAD and NECK surgical treatment log**

<table>
<thead>
<tr>
<th>GENERAL</th>
<th>ADVANCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
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</tbody>
</table>

1. Adenoidectomy
2. Tonsillectomy
3. Abscess tonsillectomy (hot tonsillectomy)
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>4.</td>
<td>Arrest of tonsillar haemorrhage</td>
</tr>
<tr>
<td>5.</td>
<td>Removal of foreign bodies</td>
</tr>
<tr>
<td>6.</td>
<td>Surgery of pharyngeal pouch (open or endoscopic)</td>
</tr>
<tr>
<td>7.</td>
<td>Endoscopic biopsy and tumour staging</td>
</tr>
<tr>
<td>8.</td>
<td>Transoral removal of salivary calculi</td>
</tr>
<tr>
<td>9.</td>
<td>Sialendoscopy</td>
</tr>
<tr>
<td>10.</td>
<td>Lithotripsy</td>
</tr>
<tr>
<td>11.</td>
<td>Transposition of salivary duct</td>
</tr>
<tr>
<td><strong>DRAINAGE OF ABSCESS</strong></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Peri- and retrotonsillar</td>
</tr>
<tr>
<td>13.</td>
<td>Para- and retro- pharyngeal</td>
</tr>
<tr>
<td>14.</td>
<td>Base of tongue</td>
</tr>
<tr>
<td><strong>CORRECTION OF MALFORMATIONS</strong></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Lingual frenulum</td>
</tr>
<tr>
<td>16.</td>
<td>Ranula</td>
</tr>
<tr>
<td>17.</td>
<td>Cysts inclusion</td>
</tr>
<tr>
<td>18.</td>
<td>Macroglossia</td>
</tr>
<tr>
<td>19.</td>
<td>Surgery of roncopathy and obstructive sleep-apnoea disorders including radiofrequency, UPPP, LAUP</td>
</tr>
<tr>
<td><strong>SURGERY OF INJURIES/TUMORS</strong></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Simple injuries</td>
</tr>
<tr>
<td>21.</td>
<td>Complex injuries</td>
</tr>
<tr>
<td>22.</td>
<td>Management of wounds</td>
</tr>
<tr>
<td>a.</td>
<td>Management of wounds breakdown</td>
</tr>
<tr>
<td>b.</td>
<td>Management of scar tissue</td>
</tr>
<tr>
<td>c.</td>
<td>Management of open neck wounds</td>
</tr>
<tr>
<td>d.</td>
<td>Fistula care</td>
</tr>
<tr>
<td>23.</td>
<td>Removal of</td>
</tr>
<tr>
<td>a.</td>
<td>Branchial cysts</td>
</tr>
<tr>
<td>b.</td>
<td>Surgery of benign tumours</td>
</tr>
<tr>
<td>c.</td>
<td>Fistulae</td>
</tr>
<tr>
<td>24.</td>
<td>Incision and drainage of abscess</td>
</tr>
<tr>
<td>25.</td>
<td>Surgery of skin tumours</td>
</tr>
<tr>
<td>a.</td>
<td>Benign skin tumours</td>
</tr>
<tr>
<td>b.</td>
<td>Malignant skin tumours</td>
</tr>
<tr>
<td>c.</td>
<td>Treatment of melanoma</td>
</tr>
<tr>
<td><strong>REPAIR OF INJURIES</strong></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Management of soft tissue injuries of the lateral and middle part of the face</td>
</tr>
<tr>
<td>27.</td>
<td>Combined fractures of the lateral and middle part of the face</td>
</tr>
<tr>
<td>28.</td>
<td>Osteosynthesis</td>
</tr>
<tr>
<td><strong>SURGERY OF CRANIAL NERVES (N.V, Nn.VII-XII)</strong></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Exploration, decompression or neurolysis</td>
</tr>
<tr>
<td>30.</td>
<td>Plastic reconstruction</td>
</tr>
<tr>
<td><strong>TUMOUR SURGERY</strong></td>
<td></td>
</tr>
</tbody>
</table>
31. Resection of the tongue
   a. Partial glossectomy
   b. Hemi glossectomy
   c. Total glossectomy

32. Reconstruction of the tongue

33. Microvascular anastomoses

34. Resection, osteosynthesis and reconstruction of mandible

35. Pharyngotomy

36. Pharyngostomy

37. Closure of pharyngostoma

38. LASER surgery of oral cavity and pharynx

39. Surgery for tumours of the nasopharynx

40. Surgery for tumours of the oropharynx and reconstruction

41. Resection of the lips and plastic reconstruction
   a. Simple
   b. Complex

**DISSECTION OF TUMOURS**

42. Removal of cervical lymph-nodes

43. Neck dissection
   1. Selective neck dissection level I to III
   2. Selective neck dissection level I to V
   3. Modified radical neck dissection
   4. Radical neck dissection
   5. Extended neck dissection

44. Soft tissue neoplasms

45. Vascular tumours

46. Neurogenic tumours

**SURGERY OF THE SALIVARY GLANDS**

47. Removal of the submandibular gland

48. Removal of the sublingual gland

49. Removal of minor glands

50. Parotidectomy
   a. Partial parotidectomy
   b. Suprafacial parotidectomy
   c. Subtotal parotidectomy
   d. Total parotidectomy
   e. Radical parotidectomy

**SURGERY OF VESSELS**

51. Preparation and ligation of vessels

52. Direct or indirect catheterization of the internal jugular vein

53. Vascular grafting

54. Microvascular anastomosis

**SURGERY OF THE THYROID GLAND**
<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>60.</td>
<td>Hemithyroidectomy</td>
</tr>
<tr>
<td>61.</td>
<td>Total thyroidectomy</td>
</tr>
<tr>
<td>62.</td>
<td>Parathyroidectomy</td>
</tr>
<tr>
<td>63.</td>
<td>Level VI neck dissection</td>
</tr>
</tbody>
</table>