Handbook of ENT

Diseases and Disorders of the Ear, Nose, and Throat

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Cape Town

Oxford University Press, Southern Africa, 1998.

Part IV

ENT skills

14. Practical skills in ENT

Dry mopping of ears

The most commonly used method of cleaning ears that are discharging is by dry mopping; see Figure 14.1. To do this you first have to prepare the mop. Take an orange stick and some cotton wool. Tease out a small piece of cotton wool and place the tip of the orange stick halfway onto it. By twisting the orange stick around and around, wrap the piece of cotton wool onto the end of the stick so that about half of the cotton wool sticks out from the end as a fluffy tip. The size of the fluffy tip is determined by the size of the ear canal into which you are going to insert it. It needs to be thin for a child's ear but can be larger for a wide adult ear canal.

You need to do the actual mopping in good light so that you can see what you are doing. Adults can be mopped while they are sitting sideways-on in front of you with their ear pointing towards the source of light. Children need to be wrapped up and held firmly in a sitting position on an adult's lap with one of the adult's hands holding the child's head steady agaist her body and the other hand holding the child's body so that he can't wriggle; see Figure 14.2. If this is unsatisfactory, the child needs to be laid down on his side on a bew with the ear to be cleaned facing upwards and an adult holding both the child's head and body steady.

With one hand, gently pull the pinna of the external ear away from the head to straighten up the ear canal. Hold the mop between the thumb and first finger of the other hand. While rotating the mop between the fingers, work the fluffy tip into the ear canal as far as it will go. The fluffy tip prevents the tip of the orange stick from damaging the eardrum, but be very careful not to push it into the ear canal too hard, and be prepared to let go of the mop if the patient jerks his head as you work it into the ear canal.

Work the mop out of the ear canal and inspect the fluffy tip to see what kind of discharge you have been able to clean out - usually purulent but sometimes discoloured by wax. Occasionally there will be some blood-staining. As long as you are not hurting the patient, there is no reason to stop mopping if there is blood-staining, but you should not continue to mop if there is blood-staining and mopping is painful. In this circumstance,

consider syringing to clean the ear canal - see *Syringing of ears* below.

Take off the cotton wool, make another mop, and clean the ear canal again. Repeat this until no more discharge is being mopped out.

When the ear canal is dry, examine the ear with an otoscope. You want to check that you have managed to get all the discharge and debris cleaned out. If not, you can either continue mopping or resort to syringing - see *Syringing of ears* below. Once the canal is clean, examine both the ear canal and the eardrum to make a diagnosis.

If you lose the cotton wool part of the mop in the ear canal, you will have to get it out again. Try and catch it with a pair of fine-toothed forceps and remove it. If this is unsuccessful, you will have to try and syringe it out.

Once you are experienced with making mops and mopping patients' ears you can teach your patients, or the attending adult in the case of children, how to make up mops and how to clean their own ears.

Syringing of ears

Syringing is a way of cleaning out ear canals by flushing them with a gentle jet of water. The most important point to remember about syringing is that the temperature of the syringing water has to be exactly the same as body temperature. If it is either too hot or too cold, syringing is going to induce vertigo (remember the caloric test for vestibular function!), a sensation described as 'being drunk in the head'. This occurs because the balance organ in the inner ear is close to the ear canal and is easily upset by changes in temperature. Syringing is a safe technique to use, provided it is done gently and only for ears with either a foreign body, wax, purulent discharge, or infected debris in the ear canal. After syringing it is essential that you examine the ear canal to check that you have indeed cleaned it out and that you are now able to examine the eardrum.

To syringe ears you will need a suitable syringe. The usual one is large and made of metal with loops for your fingers; see Figure 14.3. One problem with this type of syringe is that the plunger is often tight and does not move up and down easily inside the barrel of the syringe. If this is the case, take the syringe apart and clean the plunger and the inside of the barrel. You may need to use wire wool, an abrasive scourer, or scouring powder to get the metal surfaces clean and shiny. Apply a coating of Vaseline or something simuilarly greasy to both the plunger and the inside of the barrel and then try it again.

An alternative is to use the largest size of syringe that you can find, if at all possible one with finger loops because these syringes require only one hand for filling each time they are emptied. Do not use a metal needle but use either a suction catheter, which is then cut short, or a wide-bore intravenous cannula. It must fit onto the syringe tightly and not come off when your squirt a jet of water through it as hard as you can. Test it a few times to make sure of this before you use it but remember that you will only syringe an ear with a gentle squirt!

You will also need a jug or bowl for the syringing water, a bowl or receiver to catch the water as it pours out of the ear, and a towel or waterproof to keep the patient dry.

Syringing is done in good light so that you can see where you are placing the tip of the syringe. The patient should be sitting sideways-on in front of you with the ear to be syringed pointing towards the source of light. A child should be seated on an adult's lap with both the head and the body firmly held. Place the towel or the waterproof around the patient so that he will not get too wet. Older children and adults are shown how to hold the receiving container so that it catches the water that will come out of the ear. For co-operative younger children the attending adult should be able to hold the receiving container at the same time as holding the child but for less co-operative children a second assistant will have to be enrolled for this task.

Check the water temperature with the back of your hand - it should be exactly body temperature, no warmer and no colder. Fill and squirt out the syringe a few times to check that it is working smoothly. Fill the syringe and hold it in one hand. With the other hand gently pull the pinna of the external ear away from the head - this helps to straighten out the ear canal - and then place the tip on the syringe just next to or just into the ear canal and gently empty the syringe, directing the stram of water into the ear canal. Check the water that has come out into your receiving container to see what you have been able to flush out of the ear.

Repeat a few times and then examine the ear canal with your otoscope. Repeat the whole process a few times until the ear canal is clean.

It is sometimes difficult to get hard, impacted wax out of the ear canal. If this is the case, remember that wax dissolves in water. Lie the patient down with the wax-filled ear uppermost and fill the ear canal with water. Get the patient to pump it about a bit for ten minutes - refilling the canal a few times - and then try syringing again. Repeat this again if necessary. If this doesn't work, ask the patient to fill his ear with water and to pump it about a few times during the rest of the day and return the next day for another attempt.

When it is clean, examine the ear canal to check that you have not caused any injury by scratching it with the tip on the syringe. If you have scratched it, explain to the patient what has happened and put some ear drops in. Explain that he should return if the ear becomes sore or begins to discharge. If there is no injury, dry the ear canal by dry mopping (see above), and you will be able to examine the eardrum. If the problem for which you were syringing the ear was a discharge, you should now be able to see the eardrum well enough to make a diagnosis. If the problem was wax or a foreign body, you should check that there is not a perforation in the eardrum because, if there is a perforation, it is a possibility that the syringing may cause infection to flare up. To prevent this you should instill ear drops and instruct the patient to do this three times each day for two days and to return if the ear begins to discharge.

If the patient comes back because the ear is discharging there are two possibilities:

- The eardrum was intact. Syringing has caused an otitis externa. (See *Treatment of otitis externa.)*

- There was a perforation in the eadrum. Syringing has caused an inactive chronic otitis media to flare up and to become an active chronic otitis media. (See *Treatmetn of active chronic otitis media.)*

Instilling ear drops

Three different types of ear drops are used for treating ear infections. Ear drops may be antiseptic - an example is boracic ear drops, a cheal 'all round' preparation to use. They may be acidification agents - an example is 2 per cent acetic acid drops. These are used particularly for Pseudomonas infection - very common in active chronic otitis media. Lastly they may contain specific antibiotics. These latter drops tend to be expensive but are generally more effective than the others at clearing up infection. It is worth remembering that some ear drops burn or sting for a short while after they have been instilled and patients need to be warned about this. If you find that your patient will not use a particular ear drop because of this then try a different preparation.

When instilling an ear drop it should be obvious that the drop is not going to do any good unless it penetrates down to the area of infection. This will not be possible if the ear canal is full of pur or debris, so that cleaning of the ear canal is an essential first step (see *Dry mopping* and *Syringing*). To successfully instill ear drops, the light needs to be good enough for you to see where the ear drops are being placed. The patient should lie on her side or tilt her head so that the ear into which the drop is to be instilled is pointing upwards. Gently pull the pinna away from the head to straighten the ear canal. Drop two or three drops directly into the ear canal - if you miss, wiggle the pinna about until the drops run into the canal. Once the ear drops are in the ear canal, wiggle the pinna about until the drops run all the way down to the bottom of the canal and drop in a further two or three drops. The place a finger on the tragus - the small bump just in front of the ear canal - and squash it down so that it closes off the canal. Repeat this pumping action a few times. This helps to spread the ear drops around inside the ear canal and also pushes some of the drops through into the middle ear if there is a perforation in the eardrum. (Sometimes the drops go all the way down the eustachian tube and the patient can then taste them!) The patient should stay on her side for a further minute. As she straightens her head, some of the drops may run out and need to be wiped away.

This technique should be taught to the person who will be going to instill the ear drops at home. It is difficult for patient to instill ear drops in their own ears but if they do not have anyone to do it for them they will have to learn how to do it as well as they can.

Removal of a foreign body from the nose

These patients will usually be small, unco-operative children whose parents will either have noticed or been told about the foreign body or noted a unilateral, often foul-smelling, discharge from the nose. Parents will often have tried to get the child to blow it out but if they haven't, and the child will co-operate, this is worth trying initially.

Wrap the child up in a sheet and sit him upright, facing you, on the parent's lap with the child's legs restrained by the parent's crossed legs, one of the parent's arms holding the child's body and the other firmly holding the child's head. See Figure 14.4.

Confirm the presence of the foreign body, using a head light, if available, a torch, or an otoscope with a large speculum. You may need to suction away any accumulated secretions to see it. Is it a solid object or something soft such as sponge or paper? If something soft it can usually be grasped with a fine-toothed forceps and removed. If it is solid do not attempt to grasp it as it may slide deeper into the nasal cavity.

For solid objects, take a probe with a curved tip in one hand, steady the nose with the other hand, and pass the tip of the probe along the floor of the nose until it is past the object. Elevate the tip, trapping the object between the probe and the dorsum of the nasal cavity. Keeping the tip elevated, draw the probe out of the nose, bringing the foreign body with it until it reaches the vestibule when it can be extruded by pinching behind it with the thumb and first finger of the hand on the nose. The nose may bleed a little, especially if there is an infection, but this will soon stop. See Figure 14.5.

If unsuccessful, re-examine the nose and if the foreign body is still visible, try again. If still unsuccessful it is worth a third attempt before resorting to either a general anaesthetic or, if available, referral to a specialist service.

Cauterizing a nose

Patients suitable for cautery will be those with a bleeding site that is visible and accessible on the anterior nasal septum.

Active bleeding will need to be controlled before attempting cautery. Soak a piece of cotton wool in some vasoconstrictor nasal drops, place this into the nostril to rest against the bleeding site and request the patient to pinch his nose for five to ten minutes. Then gently remove the cotton wool.

The first step in cautery is to accurately identify the bleeding site. If a headlight is available, gently insert a nasal speculum into the nostril to open it out and push the hairs out of the way, then inspect the anterior septum. If not, many otoscopes are supplied with a fat nasal speculum which is very useful in adults. In children, you will have to use the largest ear speculum - which is too small to cauterize through, but children don't have hairy noses and the area can often be seen by just tilting the nasal tip upwards a little with a finger. In children, the usual bleeding vessel lies at the junction of skin and mucosa, in adults it is often a little behind this in Little's area.

The next step is to anaesthetize the area and this is done by spraying the septum with topical local anaesthetic solution. The 10 per cent sprays are the most effective but patients do not particularly like it when they are sprayed with them and need to be warned that it may be a little unpleasant. An alternative is to soak a piece of cotton wool with the spray and place this inthe nostril against the bleeding site. Request the patient to pinch his nose lightly for a few minutes.

While the anaesthetic is working, prepare for cautery. The most useful device is a commercially available orange stick tipped with solid silver nitrate. Also prepare two or three orange stickes with cotton wool tips - these will be used to apply pressure should the bleeding point start bleeding when the silver nitrate is applied to it. Make two or three small balls of

cotton wool for placing into the nostril and have a pair of forceps handy for manipulating them.

Once the mucosa is anaesthetized, reposition the speculum so that you can see the bleeding point and then touch this lightly with the stick tipped with silver nitrate. The mucosa will turn white as the silver nitrate burns it. Cauterize the bleeding point but as little of the mucosa around it as possible.

If it starts bleeding, take one of the sticks tipped with cotton wool and apply pressure to the bleeding point for a minute. Repeat the cautery as the blood may have washed the silver nitrate away before it effectively cauterized the vessel.

Place a piece of cotton wool in the nostril and leave it there for ten minutes. Silver nitrate stains the skin black and doing this prevents nasal secretions contaminated with silver nitrate from running out onto the skin. It is also useful to coat the skin with Vaseline before beginning to cauterzie in order to prevent staining.

Warn the patient that a small scab will form and there may be bleeding if the scab is dislodged but that this should be easily controlled by pinching the nose. Advise the patient to apply a little Vaseline or antiseptic cream to the cauterized area for a few days. Healing should be complete in about ten days.

Draining a quinsy

Quinsy is the term used to describe an abscess that develops in severe tonsillitis between the affected tonsil and its bed between the two pillars of the fauces. It is an intensely painful condition. The patients (usually young adults or older children) are toxic, cannot swallow, and often the inflammation has caused spasm of the masticatory muscles so that they have trismus as well. If a view can be obtained, the soft palate on the affected side will be seen to be inflamed and swollen and the tonsil to be pushed across to the midline.

It is a very satisfying condition to treat as relief of the intense pain is almost instantaneous if the pus can be drained - although patients still have a very sore throat for several days afterwards! If they can open their mouth sufficiently, treatment is accomplished either by aspiration or by incision. If not, you will have to refer them as an emergency to have this done under a general anaesthetic. If an anaesthetic is needed many practitioners will opt to do a 'hot' tonsillectomy to avoid having the patient come back to have the tonsils removed subsequently.

Spray the area well with 10 per cent topical local anaesthetic. While this is working, prepare either a syringe with a wide-bore needle or a scalpel. For the latter use a No 11 blade - long and pointed - and wrap strapping around the blade so that only 1 cm of the tip is exposed - this prevents inadvertent deep penetration. You will need a receiver for the patient to spit into, a mug with mouthwash and a spatula - if available, a metal tongue spatula.

Depress the tongue and select a point at the junction of imaginary lines running vertically up the anterior pillar and horizontally at the junction of uvula with soft palate. If aspirating, penetrate at this point to a depth of about 1 cm and aspirate the pus. If incising,

do the same with the scalpel blade and let the pus pour out to be spat into the receiver. See Figure 14.6.

If no pus is obtained, either the quinsy was not 'ripe' or you have not penetrated deeply enough. If the patient will allow you to do so, try again.

Whether you obtain pus or not, these patients require emergency admission as they need not only analgesics but IV antibiotic and fluids until they can swallow again. Thereafter antibiotic is continued until the tonsillitis has settled and a few weeks later the tonsils should be removed.

Emergency aspiration of a retropharyngeal abscess in an infant

A retropharyngeal abscess is diagnosed from a lateral neck X-ray and by palpation of the back of the throat with a finger tip. Normally it will be drained under the controlled conditions afforded by a general anaesthetic. Sometimes, however, the diagnosis is missed in infants until they present with severe upper airway obstruction. This can be an emergency situation. When a laryngoscope is inserted to see what is causing the obstruction, a large swelling will be seen to be obstructing the back of the pharynx.

Prepare a syringe with a wide-bore needle and a suction apparatus with a suitable throat suction nozzle (not a suction catheter). Wrap the infant in a sheet and lie him on his back with the head extended and some support under his shoulders. If possible, the table should be tilted so that the patient is in a head-down position. Insert the laryngoscope, penetrate the abscess with the needle, and aspirate as much of the pus as possible. Immediately turn the infant onto this side and suction the back of the throat for as long as pus continues to drain.

This should restore the airway and allow time to make arrangements for emergency admission.

Securing an emergency airway

Most resuscitation first aid kits will contain a laryngoscope and a selection of endotracheal tubes. This is the preferred method of securing an airway when positioning the patient or insertion of an oral airway has not proven adequate. If time permits, try to spray the back of the throat with topical anaesthetic before attempting to pass the laryngoscope as this will reduce the amount of gagging. Give another spray to the larynx as soon as it is visible to reduce the tendency for laryngospasm before attempting to pass the tube.

Although intubation is usually feasible, you will encounter emergency situations in which it may not be possible to either see the larynx or pass an endotracheal tube. Quite often obstructed patients, who are dying, vomit, usually as a response to your attempt to pass the laryngoscope. Unless a suction apparatus is available that can cope with large volumes of partially digested food you are going to find it impossible to see the larynx and inhalation of gastric content almost always occurs in this situation. For this reason always ask someone to apply very firm 'cricoid pressure' before attempting to pass the laryngoscope.

Severe head and neck trauma also presents a difficult situation because displaced skeletal elements and copious bleeding often make intubation an impossible task. In this situation, if the patient is unconscious, try positioning and insertion of an oral airway before considering intubation. A conscious patient will not tolerate an oral airway and an alternative is to try and pass as large an endotracheal tube as will fit through the nose into the pharynx to act as an airway.

If all else fails and the situation is desperate, you will have to resort to methods of desperation. The first of these is the cricothyrotomy; see Figure 14.7. Position the patient on her back with the head extended and if possible something under the shoulders. This brings the larynx and trachea forwards into prominence. Identify the cricothyroid membrane which lies between the lower border of the thyroid cartilage and the cricoid, which is the uppermost and most prominent of the tracheal rings. At its simplest, cricothyrotomy involves placing wide-bore needles through this membrane into the trachea, connecting these to a source of oxygen and blowing oxygen into the trachea in as large a volume as the system will permit. If these are not available you will have to resort to taking a scalpel, plunging it horizontally through the membrane - it will bleed a lot - and then twisting the blade vertically to open the space created. A small uncuffed endotracheal tube can then be passed through this opening into the trachea.

An alternative to the cricothyrotomy is to undertake an emergency tracheostomy. Position the patient as above. Prepare a narrow, cuffed endotracheal tube. Grasp the trachea firmly between the thumb and first finger midway between the cricoid and the sternal notch, stretching the skin tightly over it. Take a scalpel in the other hand, take a deep breath and, with a single, deep, vertical incision, cut into the midline of the trachea. It will bleed a lot but immediately pass the endotracheal tube and inflate the cuff. Draw back the tube until the cuff lies just below your incision, otherwise the end of the tube will be lying in the right main bronchus, pack the wound with a gauze dressing and secure the tube.

Glossary

This glossary contains some of the terminology generally used by tutors and others in an ENT department and in this manual.

Acoustic neuroma. A benign tumour (schwannoma) arising on either the auditory or the vestibular portions of the 8th cranial nerve.

Anosmia. A loss of the sense of smell.

Antrostomy. Procedure to form an opening from the nasal cavity into the maxillary sinus (maxillary antrum). The opening may be made in either the inferior or the middle meatus.

Antrum washout. Irrigation of the maxillary sinus after placing a trocar and cannula into the sinus from beneath the inferior turbinate. Used to determine the presence of pus in the sinus and to wash out inspissated pus.

Aphonia. Loss of the voice.

Aphthous ulcers. Ulceration of the oral mucosa of unknown aetiology.

Atrophic rhinitis. See Ozaena.

Atticotomy. A surgical procedure to expose the attic area of the middle ear cavity.

Audiometry. A method of testing the hearing using an audiometer, a machine producing pure tones which can be varied in frequency and intensity.

Barotrauma. A disorder resulting from acute pressure change such as may occur in diving or flying. Acute negative pressure change in the middle ear causes an effusion, whereas acute positive pressure change can result in round window rupture (inner ear fistula).

Bell's palsy. (Syn idiopathic facial nerve palsy). A neuritis of the 7th cranial nerve of unknown aetiology.

Blow-out fracture. A fracture of the floor of the orbit resulting from the acute pressure increase of a direct blow to the globe. Orbital contents are extruded into and trapped in the fracture, resulting in limitation of globe movement.

Branchial cyst. A cystic swelling originating from embryological remnants retained in the lines of fusion of the branchial clefts.

Caldwell-Luc antrostomy. A surgical approach into the maxillary sinus through a sublabial incision. The anterior wall of the sinus is removed to expose the sinus contents.

Caloric test. Stimulation of the vestibular system to produce nystagmus by irrigating the ear canal with water either ablve or below body temperature. The amount of stimulation is monitored with an electronystagmogram (ENG).

Choanae. The posterior openings of the nasal cavities into the nasopharynx.

Cholesteatoma. Disease of the middle ear that starts when a retraction pocket forms in the eardrum in response to negative middle ear pressure. Since the outside layer of the drum is squamous epithelium, this now forms the lining of the pocket. These pockets behave rather like epidermoid cysts and invade the middle ear cleft.

Chorda tympani nerve. A branch of the facial nerve that crosses the middle ear cavity. It carries efferent secretomotor fibres to the submandibular and sublingual salivary glands and afferent taste fibres from the anterior two-thirds of the tongue.

Cochlea. The coiled auditory receptor organ of the inner ear.

Commando procedure. A surgical procedure for ablating malignant disease of the floor of the mouth/tonsil area. It involves extensive resection of the floor of the mouth, pharynx, and mandible, combined with a radical neck dissection of all lymph node containing tissue. Flaps containing skin, muscle, and sometimes bone are needed for reconstruction.

Conductive deafness. Loss of hearing resulting from disorders in the external and middle ears. Distinguished clinically from sensorineural deafness by use of a tuning fork.

Cribriform plate. The thin plate of bone separating the roof of the nose from the anterior cranial fossa. It is perforated by the olfactory nerve fibres.

Croup. A popular term for laryngo-tracheo-bronchitis (LTB) that describes the typical cough.

Dysphagia. Difficulty in swallowing. When swallowing is painful it is known as odynophagia.

Dysphonia. A weakness of the voice rather than a hoarseness, caused either by recurrent laryngeal nerve palsy or a functional disorder.

Endolymphatic hydrops (Syn Ménière's disease). Refers to the increase in pressure that occurs in the endolymphatic duct of the cochlea, precipitating the symptoms of tinnitus, vertigo, and deafness.

Epiglottitis (Syn supraglottitis). An acute bacterial infection of the supraglottic mucosa of the larynx. Inflammatory swelling rapidly causes total airway obstruction.

Epiphora. Tears spilling over the eyelid rather than draining down the nasolacrimal duct.

Epistaxis. Bleeding from the nose.

Erythroplakia. An area of mucosal dysplasia without hyperkeratosis, hence having a red appearance rather than the white appearance of leukoplakia. May be a premalignant lesion.

Ethmoidal sinuses. A group of small air cells situated between the upper nasal cavity and the orbit.

Exostosis. A bony growth in the deep portion of the external ear canal. Seen most frequently in people who swim in cold water.

Facial nerve. The 7th cranial nerve. Intimately related to the inner and middle ear in its passage through the temporal bone.

Frontal sinus trephine. A drainage procedure for the frontal sinus performed through a skin incision above the medial canthus of the eye.

Fronto-ethmoidectomy. A surgical procedure to eradicate disease from the frontal and ethmoidal sinuses during which a wide drainage pathway is created into the nasal cavity. The surgery may be performed either internally using nasal endoscopy instrumentation, or externally through a Lynch incision around the medial canthus of the eye.

Furuncle. A localized abscess (boil) arising in a hair follicle. In ENT, these abscesses are seen in the hair-bearing skin of the external ear canal or in the nasal vestibule.

Glandular fever (Syn infectious mononucleosis). A severe tonsillitis with sloughing of the surface mucosa and a marked lymphadenopathy. There may be associated hepatosplenomegaly.

Globus syndrome. A term used to describe the sensation of a lump in the throat when there is no discernible organic cause.

Glomus tumour. A tumour arising from chemoreceptor cells. In ENT, these tumours are seen either in the middle ear (glomus tympanicum) or arising from the jugular bulb (glomus jugulare).

Glossopharyngeal nerve. The 9th cranial nerve supplying sensation to much of the pharynx.

Glottis. The anatomical area of the true vocal cords in the larynx. The supraglottis is the area of the larynx above the cords. The subglottis is the area of the larynx below the cords.

Glue ear (Syn otitis media with effusion). Refers to the thick, tencaious mucus found in the middle ear in this disorder.

Goitre. A generalized enlargement of the thyroid gland.

Grommet. A minute ventilation tube placed in the tympanic membrane to aerate the middle ear in otitis media with effusion, a disorder arising from eustachian tube dysfunction.

Haemotympanum. The presence of blood within the middle ear that imparts a bruised discoloration to the tympanic membrane.

Hallpike's test. A manoeuvre to test for the presence of positional vertigo.

Heimlich's manoeuvre. A manoeuvre to attempt to dislodge an impacted foreign body obstructing the airway by placing the arms around the patient from behind and applying sharp, forcible pressure to the upper abdomen and diaphragm.

Hoarseness. A change in the voice from normal to having a rough quality.

Hypoglossal nerve. The 12th cranial nerve that supplies motor efferent fibres to the muscles of the tongue.

Hypopharynx. The inferior portion of the pharynx. The larynx forms its anterior wall. The areas on either side of the larynx are known as the pyriform fossae. The area between these, behind the larynx, is known as the postcricoid region. The hypopharynx opens inferiorly into the upper oesophagus through the cricopharyngeal sphincter.

Idiopathic facial nerve palsy. See Bell's palsy.

Impedance audiometry. See Tympanometry.

Infectious mononucleosis. See Glandular fever.

Labyrinth. The complex of spaces and canals that comprise the inner ear, consisting of the cochlea and vestibular system. Labyrinthitis refers to infection. Labyrinthectomy refers to a destructive surgical procedure.

Laryngectomy. A surgical procedure for malignant disease of the larynx involving removal of all or a portion of the larynx.

Laryngitis. Inflammation of the laryngeal mucosa. In infancy this is usually part of a more generalized laryngo-tracheo-bronchitis (LTB or croup).

Laryngoscopy. Examination of the larynx, Indirect laryngoscopy is performed with a mirror. Direct laryngoscopy is performed with a flexible fibreoptic endoscope while the patient is awake or with a laryngoscope while the patient is under anaesthetic.

Laryngo-tracheo-bronchitis (LTB). See Croup.

Le Fort fractures. Fractures of the facial skeleton.

Leukoplakia (cf erythroplakia). An area of mucosal dysplasia with hyperkeratosis giving it a white appearance. May be a premalignant lesion.

Little's area. An area of prominent vasculature on the anterior nasal septum.

Ludwig's angina. Infection of the floor of the mouth and submental tissues, usually arising from dental infection. Swelling can push the tongue upwards and backwards to cause upper airway obstruction.

Mastoidectomy. A surgical procedure to eradicate mastoid disease. Cortical mastoidectomy refers to exenteration of all the mastoid air cells, the resulting cavity draining into the middle ear. Radical mastoidectomy refers to extending this by removal of the posterior wall of the ear canal so that the resulting cavity opens into the ear canal.

Ménière's disease. See Endolymphatic hydrops.

Mesotympanum. The middle ear cavity.

Myringitis. Inflammation of the tympanic membrane.

Myringoplasty. Surgical grafting of a defect in the tympanic membrane.

Myringotomy. An incision into the tympanic membrane that is usually followed by insertion of a grommet tube.

Nasopharynx (Syn postnasal space). That portion of the pharynx above the soft palate containing the adenoid and the eustachian cushions (the openings of the eustachian tubes). The fossa of Rosenmüller lies between the eustachian cushion and the choana.

Neck dissection (Syn block dissection, radical neck dissection). Surgical excision of all tissue

containing lymph nodes from the neck undertaken to eradicate metastatic malignant disease.

Neuropraxia. A temporal block to nerve conduction.

Nystagmus. The physical sign indicating a vestibular disorder in which the eyes slowly drift laterally and then quickly revert centrally. The nystagmus is named in the direction of the quick component. See Vestibulo-ocular reflex.

Obstructive apnoea. Inspiratory efforts are unable to overcome upper airway obstruction so that there s no air flow into the lungs. When severe, the condition is known as obstructive sleep apnoea syndrome, which has complications and can precipitate cardiac failure.

Odynophagia. Painful dysphagia.

Oro-antral fistula. A persistent opening from the maxillary sinus into the oral cavity that usually follows extraction of infected upper teeth whose roots project into the floor of the sinus.

Ossiculoplasty. Surgical reconstruction of a sound-conducting mechanism in the middle ear using either ossicle remnants or a prosthesis.

Ostium. The natural opening of a sinus into the nasal cavity. Most open beneath the middle turbinate into the middle meatus, an area known as the ostiomeatal complex.

Otalgia. Pain in the ear due either to local ear disease or referred from other sites.

Otitis media with effusion. See Glue ear.

Otomycosis. Fungal otitis externa.

Otorrhoea. Discharge from the ear.

Otosclerosis. A disorder in which the stapes becomes fixed in the oval window by localized, abnormal bony overgrowth to cause a conduction deafness.

Ototoxicity. Damage to hair cells of either the cochlea or vestibular system as a side-effect of some drugs.

Ozaena (Syn atrophic rhinitis). Refers to the smell of chronic infection related to the crusting that occurs in the nasal cavity in this condition.

Pansinusitis. Infection involving all of the sinuses.

Perilymph. The fluid in the inner ear perilymphatic compartment surrounding the endolymphatic compartment (which contains the hair cells).

Pharyngeal pouch. A herniation through the inferior constrictor muscle of the pharynx.

Postnasal space. See Nasopharynx.

Presbyacusis. The sensorineural deafness of ageing that results from gradual loss of hair cells and predominantly affects the higher tones.

Quinsy. An abscess that forms in the bed of the tonsil during a severe tonsillitis.

Ranula. A cystic swelling in the floor of the mouth that results from obstruction of the duct of a mucus-secreting gland.

Reinke's oedema. Oedematous swelling in the submucosa of the vocal cords (Reinke's space).

Rhinoplasty. An operation to alter the external appearance of the nose.

Rhinorrhoea. Discharge from the nose.

Rinne's test. A tuning fork test to distinguish between conduction and sensorineural deafness.

Romberg's test. A test to determine an individual's ability to maintain balance when standing with the eyes closed.

Sensorineural deafness. Deafness due to causes within the inner ear and/or its neural pathway.

Septoplasty. An operation to straighten a deviated nasal septum, preserving the septal cartilage (cf submucous resection).

Sialectasis. Dilatation of the ducts in a salivary gland distal to obstruction of minor ducts within the gland.

Sicca syndrome. See Sjögren's syndrome.

Sjögren's syndrome (Syn sicca syndrome). An auto-immune disorder affecting exocrine glands. In ENT, the effects see include decreased lacrimation, dryness of the mucous membranes in the nose and mouth, and swelling of the parotid glands.

Speech audiometry. A method of assessing hearing using spoken words in place of pure tones through an audiometer.

Stapedectomy. A surgical procedure in which the fixed stapes due to otosclerosis is replaced with a prosthesis.

Stapedius reflex. The reflex contraction of the stapedius muscle in the middle ear in response to loud sounds. This movement can be detected using a tympanometer.

Stridor. The high-pitched sound produced by obstruction in the airway in either the larynx (inspiratory) or the trachea (expiratory).

Submucous resection (SMR). An operation to straighten a deviated nasal septum involving removal of septal cartilage.

Supraglottitis. See Epiglottitis.

Thyroglossal cyst. A cystic swelling of embrylogical remnants left in the linfe of descent of the thyroid gland.

Tinnitus. Stimulation of the auditory system by something other than external sounds.

Tonsils. The collection of lymphoid tissue situated between the anterior and posterior 'pillars' at the entrance to the pharynx. They form part of Waldeyer's ring of lymphoid tissue around the upper aerodigestive tract.

Tracheostomy. A surgical procedure to create an opening from the anterior neck into the trachea for both respiration and aspiration of secretions.

Tympanometry (Syn impedance audiometry). A method of assessing the status of the tympanic membrane (tympanogram), the middle ear pressure, and the 'stapedius reflex' using an instrument known as a tympanometer.

Tympanoplasty. A surgical procedure to reconstruct both the tympanic membrane (myringoplasty) and the ossicular chain (ossiculoplasty).

Tympanosclerosis. Calcified scarring of the tympanic membrane often seen after grommet insertion.

Tympanotomy. A syrgical procedure to elevate the tympanic membrane in order to examine the middle ear.

Uvulo-palato-pharyngoplasty (UVPPP). A surgical procedure to tighten up the soft palate to prevent snoring.

Valsavla manoeuvre. By pinching the nose shut, holding the mouth closed, and blowing hard the pressure generated can inflate the middle ear.

Vasomotor rhinitis. One form of non-allergic rhinitis characterized by persistent swelling of the mucosa over the inferior turbinates thought to be due to parasympathetic overactivity.

Vertebro-basilar insufficiency. Temporary interruption of blood flow in the vertebral artery when punched by movements of the arthritic cervical spine. Caused 'drop attacks' and may precipitate vertigo.

Vertigo. The sensation of rotatory movement caused by vestibular system disorders.

Vestibular neuronitis. One of the causes of vertigo due to a neuritis affecting the vestibular nerve; of unknown aetiology.

Vestibulo-ocular reflex. The mechanism whereby an image stays focused on one portion of the retina during movement of the head.