

COMMON E.N.T. PROBLEMS IN CHILDREN

by

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As with all the branches of medicine, our knowledge of the otolaryngological problems of childhood has greatly increased. It is important that otolaryngologists and paediatricians should have a sound knowledge of the problems involved, so that proper treatment can be directed timely. In this article an attempt has been made to deal with the common ENT problems, mentioning the salient features only.

THE EAR AND MASTOID

Deafness in Children is seen very frequently. Acquired conductive deafness occurs due to impacted cerumen, impacted foreign body (F.B.), blockage of eustachian tube due to enlarged adenoid and "glue-ear." Acquired perceptive deafness may be congenital or acquired after birth. Congenital deafness may be complete or partial. It may result due to rubella, kernicterus, congenital syphilis, maternal influenza, acute poliomyelitis and toxæmias of pregnancy. Rubella in early pregnancy prevents or hinders the normal development of the organ of corti. In kernicterus the peripheral organs develop normally but the cochlear nuclei in the brain are damaged. There is damage both in the endorgan and in the neural elements in congenital syphilis.

Diagnosis of congenital deafness due to syphilis may present difficulty. It is of progressive nature. In the early stage VDRL is normally positive, but becomes negative later. Early diagnosis and treatment by penicillin arrest the progress of deafness in some cases.

Acquired post-foetal perceptive deafness commonly occurs following meningitis (particularly meningo-coccal). Deafness is usually a result of meningo-neuritis of the eighth nerve and occurs in about the second week of the disease & measles. Influenza, pneumonia, diphtheria, pertussis and enteric fever have all been blamed. Trauma is a possible cause but a fracture of the skull likely to cause complete deafness would most probably prove fatal. Toxic manifestations of streptomycin, dihydrostreptomycin, neomycin, quinine and salicylates can cause deafness. Deafness following sulphonamides is usually partial in degree and conductive in type.

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Treatment is by correction of defect where possible, speech training, and auditory training with social and general training to teach child to act normally in his environment. The latter is possible only in special school for the deaf.

FURUNCULOSIS OTITIS EXTERNA, DERMATITIS AND IMPACTED WAX all occur in children but are less frequent as compared to adults. However, the soft tissues swell more rapidly in the child in case of furunculosis.

FOREIGN BODY is frequently found. Treatment is removal by syringing, or by using special forceps, or a right angled probe depending on the site and nature of the F.B. In some cases post-auricular incision may have to be performed, under GA, to remove the F.B. Adequate light is essential. Considerable dexterity is necessary. In unskilled hand removal of F.B. from ear is a dangerous procedure. This applies equally when removing impacted wax.

Hairslide, pencil tip, match stick may tear tympanic membrane (T.M.) Treatment is by prophylactic antibiotic therapy, removal of offending agent if left inside. Under no circumstance should the TM be disturbed manually or by local medication.

Simple Acute Otitis Media (AOM) in Infant. Diagnosis is easy if one does not miss ear examination. Treatment is by suitable antibiotics in adequate dose and proper duration. If severe pain and bulging of T.M. is seen myringotomy, under GA and operating microscope, should be performed. Pus is sent for culture and depending on the culture report antibiotics should be changed, if necessary. Proper cleaning of meatus aseptically once a day is a must. **No drops be put in the ear.** 0.5% ephedrine hydrochloride in normal saline drops instillation in the nostrils encourage opening of Eustachian tubes. Criteria of cure is restoration of normal hearing. If hearing does not improve with adequate treatment or a low-grade mastoiditis be present cortical mastoidectomy is indicated.

"GLUE-EAR" (SEROUS OTITIS MEDIA)-could be due to large adenoid and tonsils interfering Eustachian tube opening, or be the result of U.R. Tract infection. It could be the sequela of inadequate antibiotic treatment in AOM. The result is a deaf child. Treatment is removal of the cause, myringotomy and aspiration of fluid. Repeated aspiration may have to be done in some cases. These children should be observed at least for a year.

CHRONIC OTITIS MEDIA- is a common condition. There is discharge from the ear frequently with associated deafness. The first principle of treatment is to differentiate whether the ear is **"Safe type"** (central perforation of TM) or **"dangerous type"** (marginal perforation with cholesteatoma formation). The latter type is liable to cause intracranial complications. Surgery is necessary in this type, the extent depending upon removal of cholesteatoma through the perforation to radical mastoidectomy. In the 'safe type' the principle of treatment is the removal of sources of infection (eg. adenoid removal, treatment of sinus infection), keeping ear dry and clean, and myringoplasty operation after the ear

has been free of discharge at least for six months. A dry ear, with perforated TM, is not a normal ear. The operation will preserve normal hearing, and prevent further middle ear infection.

Headache, vertigo and persisting pyrexia are features that may be associated with the development of intracranial complications specially in the 'dangerous type.'

Finally, under no circumstance one should advise a patient to put colour (eg. mercurochrome gentian violet etc.) ear drops. This will mask the view of T.M. and lead to erroneous diagnosis.

NOSE

CLEFT LIP AND PALATE—Treatment is by surgery and is often left to plastic surgeon although in palate cases the subsequent speech training should be supervised by a laryngologist. Before the age of one, post-operative oedema and a lax tongue may cause airway obstruction post-operatively. Repair should not be delayed much beyond the time when speech is begun. The idea of repair is therefore, to furnish the child with an adequate speech mechanism before it starts to pronounce words. After the age of three post-operative mortality is low but there is increasingly disappointing speech result. The true criterion of success in cleft palate surgery is the speech result that is achieved post-operatively. Hence the ideal time for cleft repair, though disputed, is generally thought to be between one and three years of age.

Post-operative management is very important, specially the role of barrier nursing cannot be overemphasised.

Incidence of EPISTAXIS in children is about twice that in adult. Epistaxis proper is rare below the age of three. Local causes of epistaxis are: erosion of Little's area, trauma—accidental or due to surgical procedures, acute rhinitis (the common cold), all forms of chronic rhinitis (simple, allergic, tuberculous, syphilitic), grossly infected adenoids, or retention of a f.B. in the nose. General-causing nose-bleed are: venous congestion (due to heart failure or vena canal obstruction); so-called bleeding diseases eg. haemophilia, thrombocytopenic purpura, aplastic anaemia, leukaemia and scurvy; heavy doses of salicylates and quinine; certain acute infections eg typhoid, malaria (cause epistaxis in early stage), and anaemia (may cause epistaxis in advanced cases). Diagnosis is obvious.

Treatment—General treatment is rest, nourishment and treatment of underlying blood dyscrasia or other systemic diseases. Local treatment consists in sustained pressure to the alae nasi for about 10 minutes or more. Failing this procedure nasal packing is done. However it is worth while to avoid nasal plugging as far as possible to prevent toxic effect of drug and damage to nasal mucosa. The next method is to cauterise the bleeding point. Recurrent epistaxis, after cauterisation is indication for submucous resection. This must also be avoided as far as practicable because this operation in children can deform the ultimate external shape of nose, and the unsupported nasal mucosa tends to remain oedematous. Post-nasal plugging and ligature of ethmoidal arteries are rarely necessary.

SINUSITIS—Usually maxillary and ethmoidal sinuses are affected. Examination shows mucopus in nose and nasopharynx with inflammatory engorgement of the nasal mucosa. Sinus x-rays and bacteriological cultures with proof punctures, when necessary, confirm the diagnosis. Treatment consists of improvement of general health (removal of adenoids and possibly tonsils), full trial of suitable antibiotics and nasal lavage with indwelling polythene tubes may all have to be considered.

DEFLECTED NASAL SEPTUM is uncommon. Ideal age for correction (SMR) is 14 years.

FOREIGN BODY Recently introduced foreign bodies have only the symptom of nasal obstruction. Long standing F.B. cause purulent nasal discharge. Diagnosis is by rhinoscopy and x-ray. Treatment is removal of the F.B. under proper light.

NASAL POLYP. in children is rare. In children under 10 years, antrochoanal polyp is the usual form. Treatment is by simple removal. Should recurrence take place Caldwell-Luc operation is indicated.

NASAL ALLERGY—Allergy manifestations in the respiratory tract are very common in children. Asthma is most common manifestation of allergy in infant. Allergic rhinitis is most commonly seen in school children who may however develop asthma later on. Nasal Sinusitis is therefore a common complication of allergy. True hayfever is rare before the age of 10. Diagnosis is by eliciting history properly, besides rhinoscopy and intradermal test. Treatment is by removal of or from causative allergen where possible, eliminating or reducing child's allergic response by desensitisation, general antiallergic treatment, spray of antihistamines with 0.5% ephedrine hydrochloride in normal saline locally, treatment of secondary conditions like sepsis, sinusitis, nasal polyp. Rest and sedative important. Finally in the treatment the psychological aspect of the disease must be remembered.

THROAT

Fauces, nasopharynx and larynx are involved by **C. DIPHTHERAE**. Formation of pseudomembrane at the site of infection, constitutional symptoms and remote degenerative changes due to exotoxins are the characteristic features. Treatment is by A.D.S. and by relief of mechanic obstruction to airway by intubation or tracheostomy when occasion demands.

THRUSH/MONILIASIS: Infection by *Candida albicans* is a common condition particularly in debilitated children and is quite serious. White patches are produced on the fauces, palate, gums, tongue and buccal mucosa. Patch will demonstrate mycelium and spores under the microscope. 1% gentian violet paint is quite effective. Local spray of nystatin is specific where available.

ADENOID: In children affection of pharyngeal tonsil or adenoids are usually important than those of palatine tonsils. The effect of their enlargement on the middle ear, normal functioning of nose, normal development of mouth, palate and teeth cannot be overemphasised. Underdevelopment of these parts together with habitual mouth breathing may lead to further and more dismal effects. Treatment of enlarged and infected adenoid is by surgical removal.

TONSILS: Diagnosis and treatment of tonsillitis is easy. The problem arises when we have to consider tonsillectomy. The views of general practitioners, physicians, laryngologists and paediatricians have reacted sharply against wholesale removal of tonsils and adenoids, due to experience gained as a result of observing and following vast number of cases for years. In the developed countries it has been a practice, at present, to conserve tonsils as far as possible. Tonsils are a part of lymphoid tissue whose main function is thought to be a protective one. Sore throat, and enlarged tonsils alone are no criteria for the removal. With better housing facilities, general improvement in hygiene and nutrition, health education and economic welfare, conservation of tonsils has been more or less successful in developed countries.

Recurrent tonsillitis, occurring more than 3 times a year and uncontrolled by antibiotics; history of quinsy; enlarged tonsils causing impedence in speech, breathing and swallowing; carrier state particularly in carriers of resistant strain of *staphylococcus aureus*, diphtheria are some of the indications for tonsillectomy. In short, *tonsillectomy should not be performed without any real justification.*

Laryngeal Stridor

CONGENITAL LARYNGEAL STRIDOR is due to an exaggerated infantile form of laryngeal inlet. Epiglottis, as in fetal life, is bended backwards longitudinally on itself. The aryepiglottic folds are also approximated. This results in the inlet of larynx to a cruciate slit. When the child is excited or cries vulvular effect is produced resulting inspiratory stridor. This resolves spontaneously during the second or third years of life.

INFLAMMATORY OEDEMA, TENACIOUS SPUTUM, PSEUDOMEMBRANE AND GLOTTIC SPASM to varying degree result in destruction of larynx. These may be caused by coccal infections (strepto and staphylo), influenzal or diphtheretical infection or by a non-specific infection (acute laryngotracheobronchitis). Treatment is by antibiotics, oxygen administration (oxygen tent and humidifier) and tracheostomy as soon as is indicated. Proper nursing is essential.

FOREIGN BODY IMPACTED IN LARYNX causes stridor by mechanical obstructions and by reflex laryngeal spasms. If this phase is survived, progressively increasing stridor ensue due to inflammatory oedema around the F.B. Treatment is by tracheostomy, removal of the F.B. and antibiotics when indicated.

LARYNGISMUS STRIDULUS is a paroxysmal condition. It usually occurs at night. The stridor occurs in children between the ages of six months and three years. It is suggested that anoxia due to partial respiratory obstruction during sleep probably with irritation of cord by post-nasal discharge precipitate laryngeal spasm and stridor. This condition is commonly seen in poorer classes or in a chronically ill, undernourished or poorly developed child. They have often sepsis or irritation in the upper respiratory tract. Treatment is by the improvement of general health and treatment of associated infections. During the attack respiration can be stimulated by splashing cold water and by pulling the tongue forward. The child must get fresh air and the frightened child must be reassured.

CYSTS AND NEOPLASMS need be removed endoscopically. Haemangiomas and sarcomas are rare and is treated by radiotherapy. Papillomas which are usually multiple and infective, tend to recur frequently even after removal. Their resolution is spontaneous at puberty.