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Surgical Audit for a Period of One Year in Ent Department Of Katuri Medical College And Hospital, Guntur District.

Dr. Pitta Narayana Rao
Prof and HOD, Dept of ENT. KMCH

Abstract:
Pediatric cases in otolaryngology presents a real challenge both to the patient their parents and the treating doctor himself. The present study was aimed to determine the variety of pediatric cases coming to the department of Otolaryngology in a rural tertiary care center of south India.

Material and Methods: *A retrospective study was conducted by evaluating the Departmental records from 1st January 2018 to 31st December 2018, taking into consideration all the patients who have undergone elective or emergency surgeries and all the clinical procedures performed in the outpatient department with or without anesthesia.*

Result: *A total of 128 procedures were performed in the outpatient clinic with or without local anesthesia during the period of one year and 181 elective and emergency surgeries/ procedures were performed in the operation theatre in the patients of Pediatric age group (0 – 18 years). Foreign body removal from nose was the most common procedure in the Outpatient department and Adenotonsillectomy was the most common surgery performed.*

Conclusion: *To conclude Pediatric otorhinolaryngology is an upcoming branch which needs lots of patience and perfection and there should be harmony with the clinicians of other departments and nursing and technical staff to help achieve favorable results and adequate patient care.*

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I. Introduction:

Audit is the examination or inspection of various books of accounts by an auditor followed by physical checking of inventory. Audit in healthcare is a process used by health professionals to assess, evaluate and improve care of patients in a systematic way. Audit measures current practice against a defined (desired) standard. It forms part of clinical governance, which aims to safeguard a high quality of clinical care for patients [1].

Audit should be transparent and non-judgemental. The aim is to find out how the present provision compares with the desired standard. This information can then be used to plan improvements in the service.

Otorhinolaryngology is a surgical subspecialty within medicine that deals with the surgical and medical management of conditions in the head and neck. Dealing with the three major senses of Hearing, Smell and Taste and functions of phonation and deglutition, every Otolaryngologists have a very important part to play in dealing with the disease as well as preserving the integrity of the structure as much as possible.

The pattern of these diseases may vary from community to community or hospital to hospital based on the availability of specialist personnel or facilities for the management of such diseases which are either congenital or acquired in origin. The acquired diseases include infections, inflammatory diseases, neurologic diseases, vascular diseases, trauma, benign and malignant tumors etc. Ear, Nose and throat diseases are serious public health problems with universal distribution affecting all age groups [2,3].

The knowledge of the ear, nose, throat, head and neck diseases is very important because of the type of morbidities which they cause due to impairment of the affected physiologic functions that usually take place in the head and neck region. These include problems of hearing, breathing, swallowing, phonation, speech, olfaction, taste, protection of the lower respiratory tract and clearance of secretions. Aesthetic problem of the face and psychological problem may occur in neoplasm and neurologic diseases of the head and neck region.

The present study tries to bring to notice the scenario of pediatric cases that attended the Department of Otolaryngology and Head and Neck surgery of a rural tertiary care centre of South India. The basic purpose of this study is to bring forward the variety of cases that will be highlighting the underlying disease prevailing in the region.

II. Materials And Methods:

A retrospective study was undertaken in the Department of Otolaryngology and Head and Neck Surgery after taking due ethical approval from the Institutional Ethical Committee. Under this study a review of all the cases that attended Department of Otolaryngology and Head and Neck Surgery and needed intervention in the Paediatric age group were taken into consideration. A retrospective analysis of the hospital records was done to determine all the emergency and elective procedures performed.

III. Result:

A total of 128 procedures were performed in the outpatient clinic with or without local anaesthesia during the period of one year and 181 elective and emergency surgeries/ procedures were performed in the operation theatre in the patients of Paediatric age group (0 – 18 years). The data collected is grouped and depicted in the following tables.

Table 1. Procedures performed in the outpatient clinic

PROCEDURES PERFORMED IN CLINIC	NUMBER OF PROCEDURES PERFORMED
Abscess aspiration	10
Incision and drainage	11
Tongue tie release	4
Punch biopsy	1
Foreign body in ear removal	30
Foreign body in nose removal	32
Intralesional bleomycin- sclerosing therapy	1
Laceration repair	2
Epistaxis management	4
Examination under microscope with suction clearance	4
Ear Syringing	29

Foreign body removal from the ear and nose was the most common procedure performed, the foreign body in the nose being most common followed by foreign body in the ear, followed by syringing of the ear for wax removal.

Table 2. Endoscopies performed under local anaesthesia and general anaesthesia:

ENDOSCOPIES	NUMBER OF PROCEDURES
Bronchoscopy	1
Rigid Oesophagoscopy	2
Diagnostic nasal endoscopy	4
Otoendoscopy	11
Laryngoscopy	3
Fibre optic laryngoscopy	1

Endoscopy procedures were performed for the diagnosis and also at times therapeutic, the choice of performing the procedure under local or general anaesthesia was considered on the cooperation of the child but routinely diagnostic nasal endoscopy, laryngoscopy and otoendoscopy are performed in local anaesthesia, while fibre optic laryngoscopy, bronchoscopy, rigid oesophagoscopy performed under general anaesthesia. Over a period of one year in our hospital, Otoendoscopy was the most commonly performed procedure followed by diagnostic nasal endoscopy.

Table 3. Intraoral surgeries performed:

INTRAORAL SURGERIES	NUMBER OF SURGERIES
Adeno + Tonsillectomy	64
Tongue lesion excision	3
Ranula excision	1
Tongue tie release	4
Mucous retention cyst excision	2
Palate and tongue laceration	4

Most common intraoral surgery performed was adeno-tonsillectomy followed by tongue tie release and repair of laceration over palate and tongue.

Table 4. Neck surgeries performed.

NECK SURGERIES	NUMBER OF SURGERIES
Brachial sinus excision	2
Excision biopsy	2

Tracheostomy	3
Cystic hygroma excision	1
Thyroglossal cyst excision	3

Neck surgeries performed showed that the tracheostomy and thyroglossal cyst excision being the most common of them.

Table 5. Otological procedures performed.

EAR SURGERIES	NUMBER OF SURGERIES
Myringotomy +/- grommet insertion	2
Pre auricular sinus excision	4
Tympanoplasty	6
Mastoid exploration	4
Cosmetic ear surgeries	2
Foreign body ear	3

Chronic otitis media is a common condition seen in paediatric population and the most common ear surgery performed was tympanoplasty.

Table 6. Nasal surgeries performed

NASAL SURGERIES PERFORMED	NUMBER OF SURGERIES
FESS	4
Limited septoplasty	4
Septal abcess drainage	1
Foreign body nose removal	10
Nasal bone fracture	2

Nasal surgeries are not often performed in children; most of the nasal procedure performed under general anaesthesia was the foreign body removal.

IV. Discussion:

This retrospective study, is an attempt to determine the variety of otorhinolaryngology surgeries and procedures performed by the department of ENT of a rural tertiary care centre of south India from a period of January 1st 2018 to December 31st 2018. Throughout this study the data has been kept anonymous and unbiased. The required safety protocols were followed in managing the paediatric cases and all the cases were managed by trained Medical and Nursing staff having experience in dealing with Paediatric Otorhinology. Re-evaluation is done in needed cases.

In our surgical audit of one year we examined diagnosed and managed 908 patients of Paediatric age group of which 181 were considered for elective and emergency surgeries under General Anaesthesia, 128 procedures performed in the Outpatient department with minor operation theatre facility. The most common procedure performed was removal of foreign bodies from the nose followed by removal of foreign bodies from the ear. Nasal foreign bodies (NFBs) are most often a paediatric phenomenon and can cause mucosal damage and, if they dislodge into the airway, can even prove fatal [4].

Foreign bodies can be classified as either inorganic or organic. Inorganic materials are typically plastic or metal. Common examples include beads and small parts from toys. These materials are often asymptomatic and may be discovered incidentally. Organic foreign bodies, including food, rubber, wood, and sponge, tend to be more irritating to the nasal mucosa and thus may produce earlier symptoms. Peas, beans, and nuts are among the more common organic nasal foreign bodies [5].

Among children, those aged 2-5 years have the highest incidence of nasal foreign bodies. In most cases, the insertion of the nasal foreign body (NFB) is witnessed, and the dilemma of diagnosis is eliminated. In one study, presentations over 48 hours after the time of insertion accounted for 14% of all cases. [6] In addition to obtaining a thorough history from the patient and his or her primary guardian(s), all caretakers is also mandatory. The extent of the workup depends on the clinical scenario. [7] Most isolated nasal foreign bodies (NFBs) require no diagnostic testing. Aside from metallic or calcified objects, NFBs tend to be radiolucent. The second most common procedure done was foreign body removal from the ear. In many cases, patients with foreign bodies in the ear are asymptomatic, and in children the foreign body is often an incidental finding.[8] Other patients may present with pain, symptoms of otitis media, hearing loss, or a sense of ear fullness. In several large case series focusing on children, researchers found that 75 percent of patients with ear foreign bodies were younger than eight years. These are followed by Ear syringing which was mostly done for removal of impacted wax.

The various endoscopic procedures that were performed in our department are tabulated in table 2. Endoscopies are a helpful diagnostic tool also aids in documentation and teaching purpose. It also helps for the parental counselling regarding the aetiology and customising the follow up review [9]. In our experience

otoendoscopy was the most commonly performed procedure as most of the time it is difficult to visualise the tympanic membrane of the children associated with congestion and oedema of the external auditory canal. This was followed by Nasal endoscopies which help in assessing the sinonasal anatomy and nasal pathology.

It was observed that because of the hesitation and un-cooperation by the child it is very hard to use indirect laryngoscopy for visualising the larynx of the child hence the use of fibre optic laryngoscopy is slowly becoming more acceptable especially in children with problems of upper airway. Most commonly fiberoptic laryngoscopies to rule out conditions like laryngeal web, stenosis, post intubation granulomas, laryngeal papillomas and voice disorders that are not responding to conservative management.

Of the elective surgeries Adenotonsillectomy was the most common surgical procedure performed in paediatric age group. Though there is a sharp decrease in the number of adenotonsillectomy but in a rural setup, as we are more commonly encountering children having unhygienic eating and playing habits, recurrent adenotonsillar infection is one of the most common disease entity encountered hence adenotonsillectomy is the most commonly performed procedure in our setup. Excision of ranula, cleft lip repair, palate laceration repair are other intraoral surgeries performed here and amongst surgeries of the neck excision biopsy of the enlarged lymph nodes of the neck is the most commonly performed procedure. In few cases surgical biopsy is needed to confirm the diagnosis and identify the subtype of lymphoma [10]. Brachial arch anomalies represent 20% of cervical neck masses in children which result from obliteration of brachial clefts with formation of cyst fistula and sinus tracts [11].

Hearing disorders are a big burden of cases in our country. In our experience majority of the patients with otitis media often present with perforation leading to hearing loss and improper development of the child hence in cases of moderately severe to severe conductive hearing loss, tympanoplasty was performed making it as one of the most common ontological surgical procedure to be performed. This was followed by mastoid exploration for children having attic involvement or affection of the mastoid air cell system.

Amongst the nasal procedures foreign body removal from the nose under general was the most common procedure performed as most of the time with their parents working in the fields the children are left unattended to play by themselves which and because of this they try to put foreign materials into their nose and ears by themselves or by their playmates which makes it as one of the most common encountered entity as well as its removal is also the most common procedure performed. Paediatric septoplasty and Functional Endoscopic Sinus Surgery were the most common surgeries performed after foreign body removal; many reports have showed concerns over adverse effect on facial and nasal growth. However in appropriately selected pediatric patients septoplasty can be safely performed[13]. We have performed four FESS and four septoplasties in a period of one year of our study. This surgical audit has helped us review our work, understand the diversities of surgeries performed at our institute and contribute to literature and also aid in parent and public education

V. Conclusion:

To conclude Paediatric otorhinolaryngology is an upcoming branch which needs lots of patience and perfection. To deal with Paediatric cases one needs a suitable infrastructure catering to the need of the cases and to deal with complication and provide a healthy and safe environment during the phase of recovery and is considered as a marker of the hospital efficiency. In the present retrospective study the most common procedure performed in the Out Patient Department was foreign body removal from the nose and the most common surgery performed under general anaesthesia was adenotonsillectomy. It should also be taken into consideration that the subspeciality of Otorhinolaryngology dealing with paediatric cases have to work in harmony with the clinicians of other departments and nursing and technical staff to help achieve favourable results and adequate patient care. Illness in children causes an enormous impact on the entire family, honest direct and compassionate parenteral counselling is the key to help reduce their psychological burden.

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