



SPECTRUM OF OTORHINOLARYNGOLOGY DISEASES: A SIX-YEAR REVIEW OF OPERATED PATIENTS IN A TERTIARY INSTITUTION

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Abstract

Background: Although the specialty of Otorhinolaryngology is regarded as one of the oldest surgical specialties that has its site of action/activity hidden in orifices, its lustre and relevance in the care of surgical pathologies have continued to grow across age groups irrespective of nationality, gender, or socio-economic class. This study aimed to determine the spectrum of operated patients at the Otorhinolaryngology Department of a tertiary health facility.

Materials and Methods: A descriptive retrospective study was carried out in Port Harcourt, among total population of operated patients, using the operation registers of the Otorhinolaryngology Department of the Rivers State University Teaching Hospital from February 2018 to May 2024. Data was analyzed and presented in tables.

Results: There were 168 (57.3%) males and 122 (42.3%) females, and their mean age was 34.7 years. Patients who were less than 10 years of age (n = 191, 65.9%) were in the majority. The most common surgical pathology was adeno-tonsillitis (n = 168, 57.9%) followed by foreign body impactions (n = 20, 6.9%), and tonsillitis (n = 15, 5.2%). One hundred and sixty-eight patients (60%) had adenotonsillectomies, 20 (6.9%) had EUA and foreign body extraction, 15 (5.2%) had tonsillectomies, while 6 (2.1%) had tracheostomy.

Conclusion: Children under 10 years of age were the bulk of surgical workload of the ENT Department. The most performed surgeries were adenotonsillectomies and foreign body extraction.

Keywords: Otorhinolaryngology Diseases, Operated Patients, Spectrum, Port Harcourt, Nigeria.

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INTRODUCTION

Although the specialty of Otorhinolaryngology is regarded as one of the oldest surgical specialties that has its site of action/activity hidden in orifices, its luster and relevance in the care of surgical pathologies have continued to grow across age groups irrespective of nationality, gender, or socio-economic class.¹ The global importance of this specialty can be seen in the over 1.5 million people living with hearing loss, the 20 million people who have chronic otitis media, and the 350,000 with head and neck cancer annually, to mention but a few.²⁻⁵ These are matters of public health significance that the domain of the ears, nose, and throat specialty handles. As in other surgical specialties, there have been many innovations in modern ENT surgery including minimally invasive and robotic procedures.⁶⁻¹⁰ Otorhinolaryngologists have also created sub-specializations in different areas like otology, otoneurosurgery and skull-base surgery, head and neck surgery, phono-surgery, rhinology and facio-plastic surgery, and pediatric otorhinolaryngology.¹¹ In spite of the progress made in the field, there are still some globally recognized challenges and issues.¹²

Some diversity exists in the experiences of ENT practitioners in different countries. In a two-year review of operated cases among ENT patients in a tertiary-level hospital in Nepal, the most commonly performed major surgery was septoplasty, followed by tympanoplasty, and adenotonsillectomy.¹³ In Africa, it has been reported that limited progress have been made in ENT services,^{14, 15} and other reports exist of challenges in infrastructure, inadequacy of personnel, equipment, medication, and surgical procedures for patients with ENT diseases in Africa.¹⁵⁻²⁰ A study in South Africa reported in year 2013 that 20% of patients visit to the general practitioner involved the ears, nose or throat, and that figure rises to 50% among pediatric population.¹ Another study in Cotonou on ambulatory ENT services reported tonsillectomy with or without adenoidectomy as the most commonly performed surgery.²¹ Experiences among ENT surgeons in Nigeria also abound with its associated challenges. An eleven-year review of ENT emergencies in Ado-Ekiti Nigeria reported seeing 1293 emergency patients in a year and three emergencies in a day,²² indicating a busy practice. Tonsillitis

was found to be the commonest reason for hospital admission in Sokoto Nigeria, in a six-year review of ENT services between 2006 and 2012.²³ A similar study in Kaduna Nigeria from 2009 to 2014 reported 1067 surgeries, and tympanoplasty was the most frequent surgery while meato-canaloplasty was the least.²⁴

The scope of practice in any given field is often guided by the cases presenting in that area. The knowledge of the pattern or spectrum of diseases in an area of practice therefore helps in identifying who is affected, by what, and what can be done to address such identified cases. The knowledge of the spectrum of operated ENT cases in our center will therefore guide planning for service delivery. The aim of this study was to determine the spectrum of operated patients at the Otorhinolaryngology Department of the Rivers State University Teaching Hospital from February 2018 to May 2024.

MATERIALS AND METHODS

Research Design: A descriptive retrospective study was carried out.

Study Area: The study was carried out in Port Harcourt, the capital of Rivers State in Nigeria.

Study Setting: The operating theatre of the Otorhinolaryngology Department of the Rivers State University Teaching Hospital was the study setting.

Study Population/Participants: All patients operated as found in the operating theatre register from February 2018 to May 2024 were included.

Sampling Method: Total population of operated patients were used.

Study Instrument: The operating theatre register was used to obtain secondary for the study.

Variables: The variables of interest were the age and sex of ENT patients operated, the diagnosis/indications for surgery, and the type of surgery done.

Validity/Reliability of Instrument: The obtained data were scrutinized and verified by the authors before use.

Data Analysis: Data was entered into SPSS version 20.0 and presented in tables. Quantitative data was presented as numbers, mean, and percentages.



RESULTS

Table 1 shows the sex distribution of operated patients. There were 168 (57.3%) males and 122 (42.3%) females, out of the 290 operated ENT patients.

Table 1: Sex distribution of patients (N = 290)

Sex	Number	Percentage (%)
Male	168	57.3
Female	122	42.7
Total	290	100

The age distribution of operated patients is shown in Table 2. Patients' age varied from 1 to 73 years. Patients who were less than 10 years of age were 191 (65.9%), followed by 10 – 19 (n = 32, 11%), 40 – 49 (n = 22, 7.6%), 20 – 29 (n = 18, 6.2%), and 30 – 39 (n = 17, 5.9%). Mean age 34.7 years.

Table 2: Age distribution of patients (N = 290)

S/N	Age Range	Number	Percentage (%)
1	< 10	191	65.9
2	10 – 19	32	11.0
3	20 - 29	18	6.2
4	30 – 39	17	5.9
5	40 – 49	22	7.6
6	50 – 59	3	1.0
7	60 – 69	5	1.7
8	70 - 79	2	0.7
9	≥ 80	-	-
Total		290	100

Table 3 shows the spectrum of ENT diseases. There were 168 (57.9%) patients who had adeno-tonsillitis, 20 (6.9%) with foreign body impaction (ear, nose, oesophagus, larynx), 15 (5.2%) tonsillitis, 6 (2%) nasal polyps, 6 (2%) nasopharyngeal/sinus tumours, 5 (1.7%) preauricular sinus, 3 (1%) laryngeal tumours, and many others. Ranula, parotid and laryngeal tumours, each make up 1% of the spectrum of operated ENT cases.

Table 3: Spectrum of ENT diseases (n = 290)

S/N	Diseases/Pathologies	Number	Percentage (%)
1	Adenotonsillitis (Obstructive Adenoid / Tonsils Enlargement)	168	57.9
2	Tonsillitis	15	5.2
4	Foreign Body Impaction (Ear, Nose, Esophagus, Larynx)	20	6.9
5	Nasal Polyps	6	2.0
6	Preauricular Sinus	5	1.7
7	Ankyloglossia (Tongue-Tie)	5	1.7
8	Ranula	3	1.0
9	Parotid Tumors	3	1.0
10	Nasopharyngeal/Sinus Tumors	6	2.0
11	Laryngeal Tumors	3	1.0
12	Others	56	19.4
	Total	290	100



Table 4 shows the spectrum of ENT surgeries carried out within the study period. One hundred and sixty-eight of the surgeries (60%) were adenotonsillectomies, 20 (6.9%) were EUA and foreign body extraction, 15 (5.2%) were tonsillectomies, 17 (6%) were excisions, 10 (3.4%) were EUA Biopsies, 6 Tracheostomies, and followed by other surgeries.

Table 4: Spectrum of ENT surgeries (n = 290)

S/N	Surgeries	Number	Percentage (%)
1	Adenotonsillectomy	168	60.0
2	Tonsillectomy	15	5.2
3	Examination Under Anaesthesia and Foreign Body extraction	20	6.9
	Ear	4	
	Nose	7	
	Throat	9	
4	Examination Under Anaesthesia and Biopsy	10	3.4
5	Excision	17	6.0
6	Polypectomies	6	2.1
7	Frenulotomy/Frenulectomy	5	1.7
8	Parotidectomy (1 Superficial/2 Unspecified)	3	1.0
9	Bilateral Intranasal Antrostomy (BINA)	3	1.0
10	Tonsillectomy + BAWO	1	0.3
11	Radical Antrostomy	1	0.3
12	Calwell-luc Operation	1	0.3
13	Tracheostomy	6	2.1
14	Others	34	11.7
	Total	290	100

DISCUSSION

The young and the old of both sexes are covered in the practice of otorhinolaryngology, without bias to the smallness of the orifices of entry to the sites of action. Majority of the patients operated were males in the ratio of

1.4: 1. This finding is similar to the observations in studies from Nigeria,²⁵⁻²⁸ and Nepal,¹³ but differs from the reports from other researchers in Nigerian studies.²⁴ With a mean age was 34.7 years, more than two third of the operated patients were less than 30 years of age, and patients who



were less than 10 years of age formed more than half of the surgical burden of the Department. This observation agrees with earlier findings of studies in Rivers State.²⁹ Audit of Otorhinolaryngological head and neck emergencies in a tertiary health care centre in Ado-Ekiti Nigeria also found that 35.7% of the patients were below 10 years and more than 50% were less than 20years.³⁰ A bimodal distribution of cases was observed between < 10 years and 40 – 49 years (7.6%).

Adeno-tonsillitis (following enlarged adenoid/tonsils) was the most frequent indication for surgery. This was followed by foreign body impaction (in the ear, nose, oesophagus, larynx), tonsillitis, nasal polyps, nasopharyngeal/sinus tumours, preauricular sinus, and laryngeal tumours, among others. These findings are similar to the findings of an earlier study published in Rivers State in year 2020, where obstructive adenoid and tonsils was found to be the commonest ENT disorder done at the University of Port Harcourt.²⁹ In Ibadan Nigeria, the location of ENT disease was found to be higher in the adenoids and tonsils,³¹ and therefore sharing similarity with our study finding. However, it differs from an Ibadan Nigeria study where the commonest ENT disease was otitis media,³² although our study was solely among operated patients. Our study showed that the second most operated ENT disease condition was foreign body impaction. This agrees with earlier reported finding from Ekiti State Nigeria, which reported that the most common ENT emergency was foreign body in the ear, nose and throat.³⁰

In this study, adenotonsillectomy secondary to obstructive adenoid/tonsils was the most commonly performed surgery, followed by EUA and foreign body extraction, excisions, tonsillectomies, and EUA and biopsies. This differs from an Ekiti study where foreign body extraction was the most common surgery.³³ It is however, similar to the findings in a secondary healthcare center in Enugu Nigeria study,³⁴ and an Indian study,³⁵ where adenotonsillectomy was reported as the most commonly performed surgery. In our study, there were few parotidectomies, polypectomies, radical antrostomy, and Caldwell-luc Operation. Ultimately, the most performed surgery at any given center will be a

function of the disease pattern in that area, the specialty of the center, available equipment for modern surgery, availability of trained and experienced surgeons, and a reflection of the time in the stage of evolution of the health system in operation in that locality.

Study Limitations: This study is limited to the use of secondary data obtained operating theatre registers, and therefore did not provide information on details of individual disease conditions.

CONCLUSION

The spectrum of operated cases involved patients whose age ranged from 1 to 73 years, and those who were less than 10 years of age constituted more than half of the surgical workload of the Department. Adeno-tonsillitis (secondary to obstructive adenoid/tonsils) and foreign body impaction were the dominant surgical diseases warranting surgery. The most performed surgeries were adenotonsillectomies and foreign body extraction.

OTHER INFORMATION

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Research Ethics Consideration: The approval of the Research and Ethics Committee of the Rivers State University Teaching Hospital was obtained. The data was collected without patients' personal details or physical contact with the patients.

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Conflict of Interest: None declared.

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