

Neonatal and Pediatric Otolaryngology [NaP Otolaryngology Study]

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Abstract

To determine the frequency of pediatric patients visiting Pediatric Out-patient department with ear-related illnesses in a tertiary care hospital of South East Asia. The aim of the study was to specify the burden of ear infections in the pediatric population. Ear diseases in children can have consequences if not treated promptly, and can result in high morbidity, hearing disabilities and even mortality. Diagnosing such conditions untimely, and treating them effectively can reduce the undesired outcomes. According to World Health Organization, approximately 278 million people in developing countries, like Pakistan, India, Bangladesh, suffered from moderate to profound hearing impairment. Out of which, 25% had hearing impairment since childhood. This cross-sectional study was conducted from January 2015 - December 2017. Pediatric patients under 7 years of age were recruited in this study. A history and examination form designed particularly for the study was filled by concerned doctor. Pediatric patients of age ≤ 7 years regardless of gender presenting to pediatric clinic with principal complain of otalgia, discharge from ear, decreased hearing, pulling in the ear, tinnitus, itching, aural blockage, localized symptoms in and/or around ear (swelling, redness) associated with vertigo, and perforation were included in the study. Patients having systemic illnesses like autoimmune disorders, metabolic syndromes, congenital hearing defect, and neoplastic disorders of ear and immunocompromised patients were excluded. Most of the patients presented with complaints of earache 59%, hearing impairment 57% and aural blockage or heaviness 34%. Other symptoms were itching 27%, discharge 22%, tinnitus 1% and vertigo 1%. Many of the patients presented with multiple and bilateral symptoms except for tinnitus, which was unilateral. Majority of patients had impacted wax 34% and otomycosis 26%. Other conditions were furunculosis 4%, foreign body 3%, acute otitis media 4%, traumatic tympanic membrane perforation 1%, Otitis media with effusion 3% and chronic suppurative otitis media 1%. Infections in growing age can cause permanent hearing impairment. Hearing loss may impact the academic performance of the children. Thus addressing the incidence and prevalence of Otolaryngological infections in pediatric patients is a matter of great concern.

Keywords: Pediatric Patients; Ear Infections; Otolaryngology; Discharge; Hearing Loss

Introduction

Ear infection is an inflammation of the middle ear, usually caused by bacteria, that occurs when fluid builds up behind the eardrum [1]. According to World Health Organization, approximately 278 million people in developing countries suffered from moderate to profound hearing impairment. Out of which, 25% had hearing impairment since childhood. Most infections can be treated at an outpatient setting

with antimicrobials, or only expectant observation [2]. Inner ear complications are due to bacterial infections [3]. Hospital treatment with parenteral medication, and myringotomy or tympanostomy, may be needed to treat those with severe, prolonged symptoms, or with complications. Signs and symptoms are earache, headache, fever, discharge from the ear, mild deafness, difficulties in sleeping and loss of appetite. The most common intratemporal complication of acute otitis media is acute mastoiditis [4]. If a child with acute mastoiditis does not respond to this treatment, or if complications develop, further examinations and other surgical procedures, including mastoidectomy, are considered. Other complications include labyrinthitis, perforation, hearing loss, problems with speech and language development, meningitis, brain abscess and cholesteatoma [5].

Objectives of the Study

To determine the frequency of pediatric patients visiting Pediatric Out-patient department with ear-related illnesses in a tertiary care hospital of South-East Asia.

Aims of the Study

The aim of the study was to specify the burden of ear infections in the pediatric population.

Methodology

This cross-sectional study was conducted from January 2015 - December 2017. Sample size is 492. Pediatric patients under 7 years of age were recruited in this study. A history and examination form designed particularly for the study was filled by concerned doctor.

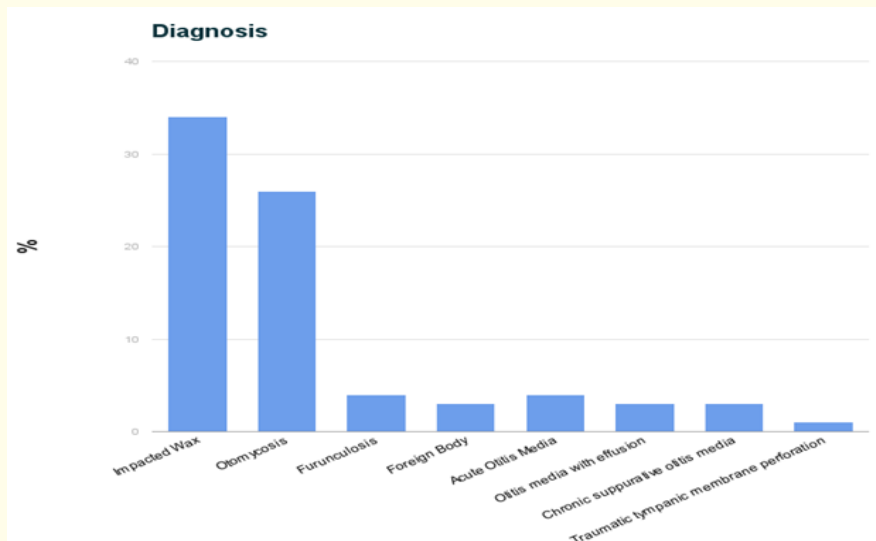
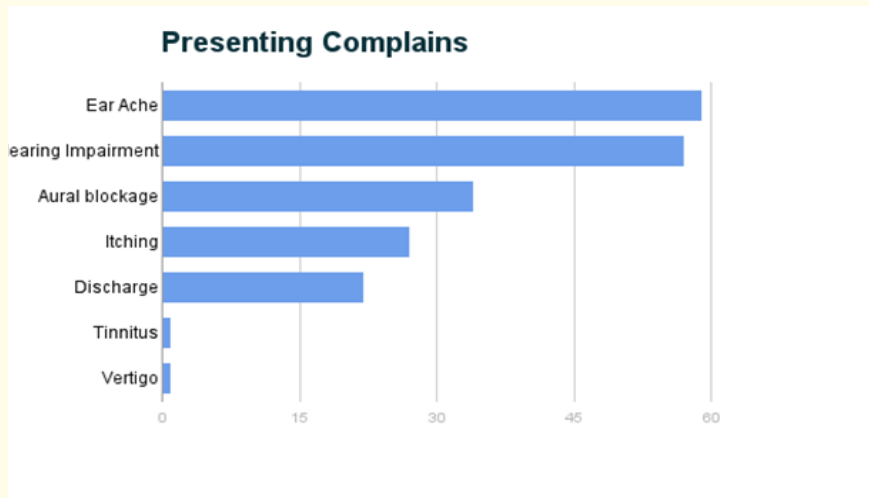
Pediatric patients of age ≤ 7 years regardless of gender presenting with principal complain of otalgia, discharge from ear, decreased hearing, pulling in the ear, tinnitus, itching, aural blockage, localized symptoms in and/or around ear (swelling, redness) associated with vertigo and perforation were included in the study. Patients having systemic illnesses like autoimmune disorders, metabolic syndromes, congenital hearing defects, neoplastic disorders of ear and immunocompromised patients were excluded from the study.

Results

Out of 492 pediatric patients, most of the patients presented with complaints of Earache 59%, hearing impairment 57% and aural blockage or heaviness 34%. Other symptoms were itching 27%, discharge 22%, tinnitus 1% and vertigo 1%. Many of the patients presented with multiple and bilateral symptoms except for tinnitus, which was unilateral. Majority of patients had impacted wax 34% and otomycosis 26%. Other conditions were furunculosis 4%, foreign body 3%, acute Otitis media 4%, traumatic tympanic membrane perforation 1%, Otitis media with effusion 3% and chronic suppurative Otitis media 1%.

Discussion

Ear diseases in children can have consequences if not treated promptly, and can result in high morbidity, hearing disabilities and even mortality. Diagnosing such conditions untimely, and treating them effectively can reduce the undesired outcomes. Ear infections are the most common reason parents bring their child to a doctor. Three out of four children will have at least one ear infection by their third birthday. The infection usually affects the middle ear and is called otitis media. The tubes inside the ears become clogged with fluid and mucus. This can affect hearing, because sound cannot get through all that fluid [6,7]. Ear infections most often develop after a viral respiratory tract infections [8].



Conclusion

Infections in growing age can cause permanent hearing impairment. Hearing loss may impact the academic performance of the children. Thus addressing the incidence and prevalence of Otological infections in pediatric patients is a matter of great concern. Acute mastoiditis is a serious complication of acute otitis media and has been increasingly reported in the last decade. Infants and children with upper respiratory tract infection (URI) often have concurrent acute otitis media (AOM).

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