

# Pattern of OPD Attendance of Pediatric Patients in Ophthalmology OPD in a Tertiary Referral Hospital of Andaman and Nicobar Islands

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## ABSTRACT

**Introduction:** Children experience a variety of eye problems, many quite distinct from adult eye diseases. Study aimed to analyze the pattern of OPD attendance of Paediatric patients of Ophthalmology OPD in a tertiary referral hospital in a remote group of islands of India.

**Material and Methods:** Prospective observational study, in which paediatric patients(0-15 years) between June 2017 -August 2017 attended/referred to our hospital were enrolled. These patients underwent detailed ophthalmic examination and intervention as required. Age, gender, history, mode of referral, Demographic data and details of anterior and posterior segment evaluation were recorded

**Results:** 451 patients were enrolled. Age ranged from 1 day to 15 years; Male: female ratio was 1.2:1. Refractive errors, allergic eye disease followed by trauma were the most common finding. Infectious conjunctivitis, strabismus, NLD block, cataract, lid disorders were the other causes. Most common mode of referral was self (Parents/guardians) followed by school referrals.

**Conclusion:** OPD attendance is just an approximate reflection of the incidence of disease in a particular region.

**Keywords:** Paediatric Patients, Ophthalmology OPD, Refractive Error, Self Referral

## INTRODUCTION

Common eye disorders seen in children are Refractive errors such as myopia(near-sightedness),hyperopia (far-sightedness) and astigmatism which can often be corrected with prescriptions of glasses or contacts, Infections conjunctivitis, Blocked nasolacrimal ducts, and Pediatric cataracts<sup>1,2</sup>, to name a few. The ophthalmology OPD of the only tertiary referral hospital of the Andaman and Nicobar Islands runs for 6 days in a week and provides eye care to the patients of the islands on the basis of walk in system with/without referral, in the order of their arrival and according to severity of eye conditions. Patients undergo a preliminary ophthalmic examination by the ophthalmic assistants and are then attended by the ophthalmologists where they are comprehensively examined and treated. Patients less than 3 years of age are directly seen by the ophthalmologists. OPD attendance among paediatric patients can predict the occurrence of disease in specific months, contributory factors (seasonal factors) and also predict the estimated OPD attendance in future so that the required resources and logistics can be managed for the efficient management of the case. Study aimed to analyze the pattern of OPD attendance of Paediatric patients of Ophthalmology OPD in a tertiary referral hospital in a remote group of islands of India.

## MATERIAL AND METHODS

Study was conducted in department of Ophthalmology, G B Pant, ANIIMS, Port Blair. The patients were first attended by the ophthalmic assistants except for children less than 3 years age who were directly seen by the Ophthalmologists. They underwent a preliminary history and vision assessment and orthoptics and then a detailed examination with slit lamp was done followed by dilated fundus examination. Fundus examination was skipped for infectious cases on the day of presentation and such patients were asked to review at later dates for the same. Dilatation was done with Atropine eye ointment for less than 3 year olds, Homatropine for 3-10 years old and Tropicamide eye drops for >10 year olds. Post mydriatic tests were done as appropriate. For ROP assessment diluted Tropicamide plus was used. For cases of suspected NLD block, syringing was done under local/sedation, as needed, to confirm the same.

**Inclusion criteria:-** All paediatric patients (1 day-15 years) attending Ophthalmology OPD were enrolled in the study carried out from June 2017-August 2017. They were classified into 3 groups on the basis of their referral as self referral, referral by other doctors/hospitals, referred through school screening programs.

**Exclusion criteria:** Patients who were ophthalmologically normal were not enrolled.

## STATISTICAL ANALYSIS

Results were statistically analysed using descriptive statistics using microsoft office 2007.

## RESULT

Paediatric patients from 1 day -15 years were enrolled in our study. Out of the 451 patients who attended the Ophthalmology OPD from June 2017 –August 2017; 248 were male and 203 were female children (table 1) with Male: Female ratio of 1.2:1. All the children were further classified into 3 age groups 0-5 years, 5-10 years and 10-15 years and it was found that maximum patients belonged to the age group of 0-5 years followed by 5-10 years age group (table 1).

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Age and gender distribution	Male	Female	Total
0-5 years	90(19)	81(17)	171(37)
5-10 years	91 (20)	75(16)	166(36)
10-15 years	67(14)	47(10)	114(31)
Total	248(54)	203(45)	

Table-1: Age and gender distribution

Mode of referral	Male	Female	Total
Self (Parents/Guardians)	121(26)	115(25)	236(52)
Hospital /Doctors	40(8.8)	35(7)	75(16)
School screening	87(19)	53(17)	140(31)
Total	248(54)	203(45)	

Table-2: Mode of referral

	Male	Female	Total
Refractive errors	91(20)	85(18)	176(39)
Allergic eye disease	56(12)	21(4)	77(17)
Trauma	23(5)	25(5.5)	48(10)
Infectious conjunctivitis	34(7)	31(6)	65(14)
NLD block	11(2)	10(2.2)	21(4)
Cataract	2(0.4)	1(0.2)	3(0.6)
Lid disorders	25(5.5)	22(4)	47(10)
Squint	06(1)	8(1.7)	14(3)
Total	248(54)	203(45)	

Table-3: Final diagnosis

	Number	Percentage
Closed globe	23	5.01%
Open globe	1	0.22%
Adnexal	24	5.3%
Total	48	10.64%

Table-4: Pattern of ocular trauma

Patients were also classified on the basis of their mode of referral (table 2). It was found that maximum (236 patients) were self referral i.e., they came by themselves or were brought by their parents/guardians (52%), a few others were either referred by other doctors or from other hospitals across the islands(16%) and the rest were children referred to us by school screening programs (31%).

The patients were then grouped according to the diagnosis made by the ophthalmologists (table 3).It was found that the majority of the patients were the ones with refractive errors (39%) followed by allergic eye diseases (17%), infectious conjunctivitis (14%),lid disorders (stye, chalazion {10%}),squint(3%) (trauma (10%){close globe(5.01%), open globe(0.22%) adnexal (5.3%)}, NLD block (4%) and cataract (0.6%).

## DISCUSSION

The male:female ratio of the children was 1.2:1 with a slight preponderance of male patients which was not significant. Patients with Refractive errors constituted the maximum percentage (39%) in our 3 months long study which is in support to the studies conducted by Wang et al<sup>3</sup>. This is in contradiction to study conducted by Vernon et al<sup>2</sup> where trauma (corneal abrasion) was the most common reason for

presentation to eye OPD. The next common presentation in our study was allergic eye disease, a problem which can be attributed to the high amount of parthenium grass<sup>4</sup> found across the islands. This was followed by conjunctivitis; bacterial /viral (14%) very close to a study conducted by Tsai et al<sup>7</sup> where it was found to be 19%.In our study trauma constituted 10% of all OPD cases and this was much lower to other studies<sup>2,3</sup>.

Our study showed that in the less than 15 year age group, a higher frequency of ocular trauma occurred at home, followed by school, play ground, and finally the street. This agrees with Kaimbo et al<sup>12</sup> who stated that street and home-related injuries accounted for 54% of all ocular injuries. Wooden stick was the cause of injury in 15.20% of patients, followed by cricket ball (15.2%). This is in contrast to other studies done in African countries which stated that 25% of ocular injuries in children are from gunshots, 24.2% from tools, and 21.8% from assault which reflect the cultural and socio-economical differences between the countries.<sup>13</sup> Self<sup>8,9</sup>(Parents/Guardians)referral constituted the maximum number similar to studies conducted by Burton et al and Jones et al in the mode of referral. One possible reason for this can be postulated by the fact that parents have much more contact with their children and therefore have the opportunity to observe abnormality even when it appeared only intermittently, as with intermittent strabismus. Parents and relatives proved to be good at detecting conditions with obvious outward signs, such as squint, trauma, red eyes, and lump on the lid. However, they were not so good at noticing poor vision, and it is in this area that the work of the health professionals is especially important.

## CONCLUSION

OPD attendance is just an approximate indicator of the incidence of particular disease, since, not all patients suffering might pay a visit to the hospital. In spite of the above fact, the pattern of patients presenting to the OPD during specific months can help in preparedness of disease conditions during the specific months and also help the general physicians and paramedics (ophthalmic assistants and nurses) for appropriate and timely referral to the Ophthalmologists because of unavailability of resources and ophthalmologists in other islands.

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