



Original Research Article

Awareness about paediatric cataract among the middle aged patients attending ophthalmology OPD: A teaching hospital survey

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ABSTRACT

Aim: To study the awareness about paediatric cataract in middle aged patients attending the teaching hospital OPD.**Materials and Methods:** 200 willing participants in the middle age (30-60 years), were selected from the ophthalmology OPD. Each participant was given the questionnaire enquiring their knowledge about the paediatric cataract. The questionnaire was in the regional language. The questionnaire was orally asked to the illiterate participants. The response to each question was recorded.**Results:** 64(32%) participants out of 200 knew that cataract can affect children. 25(12.5%) of them were aware of the fact that the paediatric cataract can cause permanent blindness. 30(15%) knew about the few factors during pregnancy which can cause cataract in new born. 30(15%) knew about the availability of the treatment for the paediatric cataract.**Conclusion:** Majority of the participants recruited showed very low level of awareness regarding the paediatric cataract. The knowledge regarding the consequences and availability of treatment was also very low. Higher literacy level in the participants was associated with increased awareness. Paediatric cataract which contributes to high blind person years and it being an avoidable cause of childhood blindness can be managed at the community level in a better way by increasing its awareness.© 2020 Published by Innovative Publication. This is an open access article under the CC BY-NC license (<https://creativecommons.org/licenses/by-nc/4.0/>)

1. Introduction

Paediatric cataract is one of the commonly encountered causes for the avoidable childhood blindness. It accounts for 7.4%-15.3% of paediatric blindness. Other causes being ROP, glaucoma, corneal scar etc. The incidence of paediatric cataract ranges from 1.8-3.6/10000 children.¹ Paediatric cataract can either be congenital or developmental. Congenital cataract presents at birth whereas developmental cataract can present anywhere between infancy to adolescence. The overall prevalence of childhood cataract is about 0.32-22.9/10000 children and of congenital cataract is about 0.63-9.74/10000 children.²

There are many etiological factors responsible for the paediatric cataract. The Occurrence of paediatric cataract can be prevented by avoiding these etiological factors.

Some of these factors include TORCH infections, radiation exposure, malnutrition and ingestion of cataractogenic drugs during pregnancy. Trauma, malnutrition and as a complication of other eye diseases in children also belong to the modifiable risk factors for paediatric cataract. Creating awareness among the general population regarding these modifiable risk factors will help in reducing the incidence of the paediatric cataract.

Importance of early detection and management is well known in paediatric cataract. Congenital cataract if diagnosed and managed as early as possible enables better prognosis. The developmental cataract is found to have a better outcome than the congenital cataract.³ Laterality, timing of presentation and surgery, presence of nystagmus, strabismus, amblyopia and other associated ocular or systemic abnormalities are the factors which influence the surgical outcome and the visual prognosis.^{4,5} Nystagmus, strabismus and leucocoria can be easily identified by the

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parents. If parents are educated to look for these signs and to consult the ophthalmologist as soon as possible it would help in reducing the blindness due to paediatric cataract. Awareness regarding the availability of the treatment for the paediatric cataract should also be increased in the general population.

Most of the people believe that cataract is a disease of old age. The concept of children developing cataract is less known in general population. As evident from the above facts, awareness of paediatric cataract in general population has a significant impact on its management and the outcome in children. Our study aims at estimating the awareness regarding the paediatric cataract and its treatment, in people attending the outpatient department of the teaching hospital.

2. Material and Methods

2.1. Study setting

The subjects in the study are the patients who attended the outpatient department of the Subbaiah Institute of Health Sciences and Research Centre, Shimoga, India.

2.2. Study type and duration

It is a cross sectional observational study conducted during the month of February 2019

2.3. Sampling methods

The participants in the study were determined by convenient sampling. 200 patients who met the inclusion criteria were chosen for the study. The sample size was calculated based on formula for estimation of proportion.

2.4. Inclusion criteria

Age – 30-60 years.

Sex – both the sexes were included.

2.5. Exclusion criteria

Age - <30 years and >60 years

2.6. Data collection procedure

The participants included in the study were given a structured questionnaire. The questionnaire was in the regional language. Response to each question was recorded. Illiterate participants were asked for the responses to the questions orally and were recorded accordingly.

2.7. Questionnaire

1. You know that cataract can affect children?
2. You know that cataract can lead to permanent blindness in children?

3. You know that cataract in children can be caused by following during pregnancy?
4. Malnutrition
5. Infections
6. Drug intake
7. Radiation exposure
8. You know that there is treatment for cataract in children?

3. Results

Out of 200 participants in the study, only 64(32%) of them had the knowledge that cataract could affect children. Our study included patients in the age group ranging from 30-60years. The average age being 40.47 ± 8.12 . The participants in the age group 30-39years had the highest percentage of awareness of the paediatric cataract. Among 64 participants who were aware of paediatric cataract, 31 were male and 33 were female.

The literacy status of the participants was included in data collection and as evident from the Table 2, higher the literacy level higher is the percentage of people aware of the cataract in paediatric age group. This shows the importance of education in achieving knowledge and its power to change a life. The percentage of participants aware of paediatric cataract was least (11.1%) in the illiterate group and maximum (61.2%) in the participants with education above pre university level. The proportion of people with knowledge about paediatric cataract in literate and illiterate participants was statistically significant (p value -0.046).

The consequence of delayed treatment or no treatment for paediatric cataract is dire. This information is necessary for the parents to get their child examined and treated as soon as possible. We assessed the knowledge of this in the participants and 25(12.5%) of them knew that delayed or no treatment can cause permanent blindness in children.

The study also enquired the participants regarding the knowledge of the factors during pregnancy which can cause paediatric cataract. 30 participants out of 200 knew about few factors. The information regarding these factors helps in reducing the incidence of the paediatric cataract. Only 30(15%) participants among 200 knew about the availability of the treatment of the childhood cataract.

4. Discussion

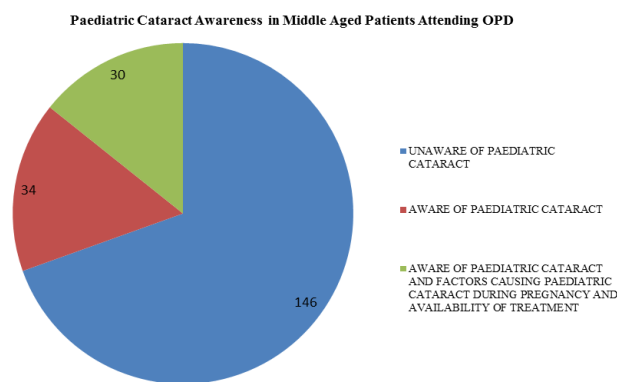
Globally it is estimated that around 70 million blind person years is contributed by the childhood blindness. Childhood blindness is the second largest cause of blind-person years following cataract.⁶ Paediatric cataract is one of the major contributor of childhood blindness. The prevalence of the paediatric cataract is more in the low-income economies like India and the burden of visually impaired children is high. Hence prevention of paediatric cataract becomes an essential tool in dealing with the problem of childhood

Table 1: Awareness of paediatric cataract in different age groups.

Age group	Male	Female	Aware of paediatric cataract	Percentage of awareness
30-39	37	66	41	39.8%
40-49	33	32	14	21.5%
50-60	24	8	9	28.1%
Total	94	106	64	32.0%

Table 2: Awareness of paediatric cataract and literacy level of participants.

Education level	Number of participants	Number of participants aware of paediatric cataract	Percentage
Illiterate	18	2	11.1%
High school	107	24	22.4%
Pre university	26	8	30.8%
Degree/nursing	49	30	61.2%

**Fig. 1:** Paediatric cataract awareness in middle aged patients attending OPD

blindness.

Vision 2020 aims to reduce the global prevalence of childhood blindness from 0.75/1000 to 0.4/1000 children by the year 2020.⁷ In India the action plans of Vision 2020 are aligned with National Programme for the Control of Blindness (NPCB). NPCB is the national level programme which includes the control of childhood blindness as one of its priorities. The main objective of NPCB is to reduce the avoidable blindness through identification and treatment of curable blindness at primary, secondary and tertiary levels of eye care which includes the paediatric cataract management.

Efforts should be made to reduce the incidence of paediatric cataract due to preventable causes. One third of congenital cataract are found to be inherited and the other third associated with environmental risk factors and the remaining are idiopathic.⁸ Immunisation against the rubella and measles in women of child bearing age, educating the general population regarding the risk factors during pregnancy which can cause congenital cataract, avoiding consanguineous marriage helps in reducing the incidence of congenital cataract. Trauma to the eye is one of the

known causes of developmental cataract which can easily be prevented by taking necessary precautions.

Early detection and timely management of paediatric cataract is equally important. This can be carried out at two levels. One through the health personnel who are involved in the initial care of children – paediatricians, obstetrician, primary health care workers etc. and the other one through the parents. These people should be made aware of the identification of paediatric cataract, importance of early referral and treatment. Ophthalmic reference of every child at birth and in the school going age should be advised.

Barriers encountered by the parents in managing the paediatric cataract include access to services, economic difficulties and beliefs.⁹ In addition to these, children usually do not complain of the symptoms and identification of visual loss in very young children is difficult. In adults most of them gain good vision after removal of the cataract. Eyes are still developing in children and untreated cataract can have irreversible visual defects even after treatment. Long follow up and poor results further reduce the parents' enthusiasm in obtaining the prompt treatment.

Ophthalmologists also face different hurdles in managing the paediatric cataract. Postoperative outcome in children are based on factors like type and laterality of cataract, age of presentation, presence of strabismus and nystagmus, associated glaucoma and best corrected visual acuity.¹⁰ Acquiring competency and good surgical skills in managing paediatric cataract is challenging for an ophthalmologist. The surgery itself carries significant risk. Postoperative complications like severe inflammatory reactions, visual axis opacifications, infections and retinal complications have to be dealt frequently by ophthalmologist in paediatric cataract surgery.¹¹

Looking at all the challenges in the management of paediatric cataract, prevention of avoidable cases seems to be the best way to avoid childhood blindness. There are many ways of increasing the paediatric cataract awareness. Holding promotional events on the specific days like

World Sight Day or during the Cataract awareness month –June is one of the effective ways of achieving the desired outcome. Distributing brochures, leaflets, posters and video on child eye health at hospitals, screenings, promotion events, etc. helps in reaching out to the general population competently. Utilising the communication channels –entertainment media, mass media tools -text messaging, social networking, email and interpersonal communication disseminates the information to a larger group of people. Health education to mothers regarding the prevention, identification of symptoms of paediatric cataract and whom to approach in case of problem will go a long way in tackling the paediatric eye health problems.¹²

5. Conclusion

Majority of the participants recruited showed very low level of awareness regarding the paediatric cataract. The knowledge regarding the consequences and availability of treatment was also very low. Higher literacy level in the participants was associated with increased awareness. Paediatric cataract which contributes to high blind person years and it being an avoidable cause of childhood blindness can be managed at the community level in a better way by increasing its awareness.

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7. Source of Funding

None.

8. Conflicts of Interest

None.

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