

Utilization of Low Vision Aids in Buphthalmos

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Research Article

Volume 3 Special Issue 2

Received Date: September 28, 2018

Published Date: October 31, 2018

DOI: 10.23880/oajo-16000S2-020

Abstract

Purpose: To analyse the utilization of the prescribed low vision device in the subjects of Buphthalmos.

Methods: Prospective, cross sectional and observational study was performed at low vision centers in Gujarat. All the visual functions were analysed after proper refractive correction. Low vision aids were prescribed and follow up was taken after 3 months to know the utilization of prescribed low vision devices. Data was analysed using SPSS software version 20.

Results: 87 subjects were included in the study. Out of them, 61% were males. It shows that spectacles of refractive correction (78%) were mainly used by subjects for distance. For near, maximum CCTV (96%) is used which is followed by stand magnifier (83%). This can be taken into consideration while prescribing devices for Buphthalmos.

Conclusions: In cases of Buphthalmos, vision can be enhanced by illuminated stand magnifier or CCTV for near and spectacle correction for distance.

Keywords: Buphthalmos; Low vision aids

Introduction

Buphthalmos is a congenital glaucoma. It mainly occurs in the infantile stages of the subjects, so it is also known as Infantile Glaucoma. Here, aqueous outflow system is obstructed due to the encroachment of the cellular membrane at the angle of the anterior chamber and abnormal cleavage of the angle of the anterior

chamber. Eyeball gets enlarged, sclera gets thinner, enlarged cornea, Tremulousness of the Iris, Flattened crystalline lens and rise in Intra ocular pressure occurs. That's why, whatever the retinal stimulation is needed for the brain that must be insufficient. Due to improper stimulation to the brain and damaged optic nerve head creates low vision to the subjects [1-3].

Methodology

A prospective, cross sectional and observational study was performed at low vision centers in Gujarat within the period of 3 years. All the subjects are enrolled with informed consent. Subjects having congenital buphthalmos and is considered in the low vision criteria were included in the study. Subjects who were below the low vision category and no pl vision were excluded from the study. Subjects having any other systemic disease associated were also excluded from the study. Visual acuity was assessed with various Log Mar charts. Contrast Sensitivity was assessed with Hiding Heidi charts and colour vision was assessed with PV 16 (Precision vision colour). All the functions were assessed after full refractive correction for distance and near. Optical, Non optical and electronic low vision aids were prescribed as per the need. Optical aids most commonly prescribed for distance was spectacles and telescopes (power 3x, 4x and 6x) as required. For near, high add aspheric spectacles, reading bar magnifier and illuminated stand magnifier was prescribed. In, non optical devices, large print book and reading stand were prescribed for near. CCTV was prescribed as electronic magnifier. Follow up was taken after 3 months and analyzed which device was used maximum by the subjects. Data was analyzed using SPSS software version 20 [4,5].

Results

A total of 87 subjects were included in the study. Figure 1 shows distribution of papers as per the age group. Figure 2 shows gender wise distribution of the subjects. Out of that, 61% of subjects were male and 39 % were female. Figure 3 shows maximum usage of devices of subjects having Buphthalmos. It shows that spectacles of refractive correction (78%) were mainly used by subjects for distance. For near, maximum cctv (96%) is used which is followed by stand magnifier (83%).

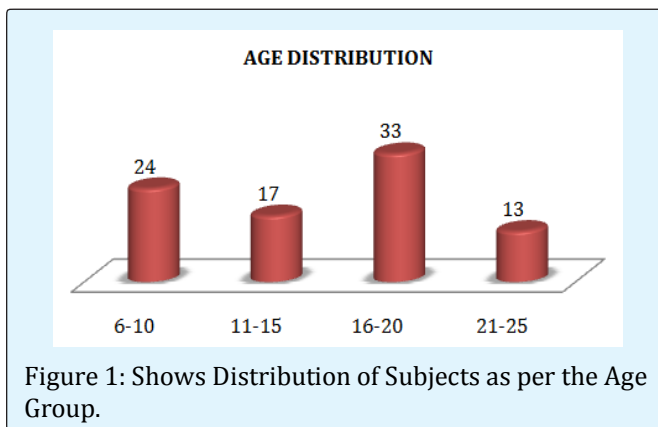


Figure 1: Shows Distribution of Subjects as per the Age Group.

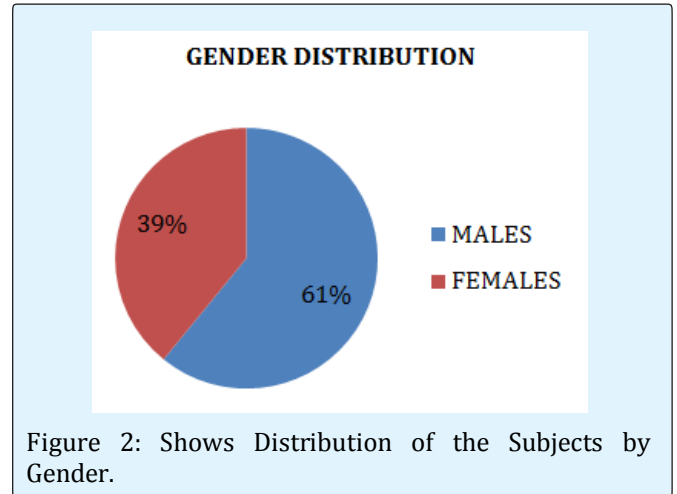


Figure 2: Shows Distribution of the Subjects by Gender.

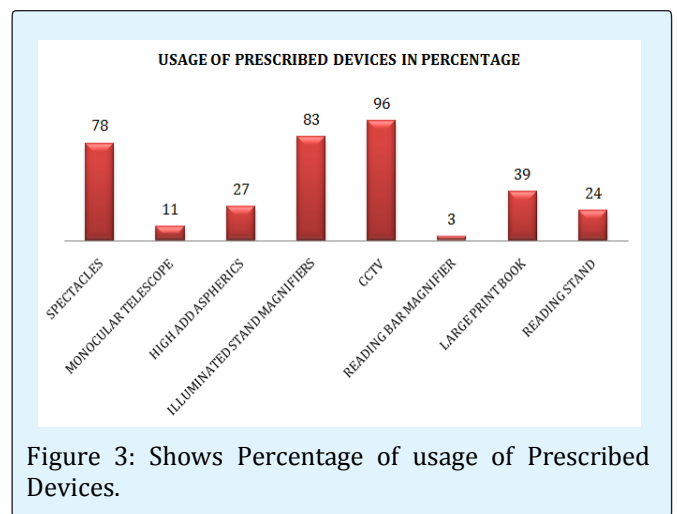


Figure 3: Shows Percentage of usage of Prescribed Devices.

Chart 1 shows that maximum usage of devices used by the subject. This can be taken into consideration while prescribing devices for Buphthalmos [6,7].

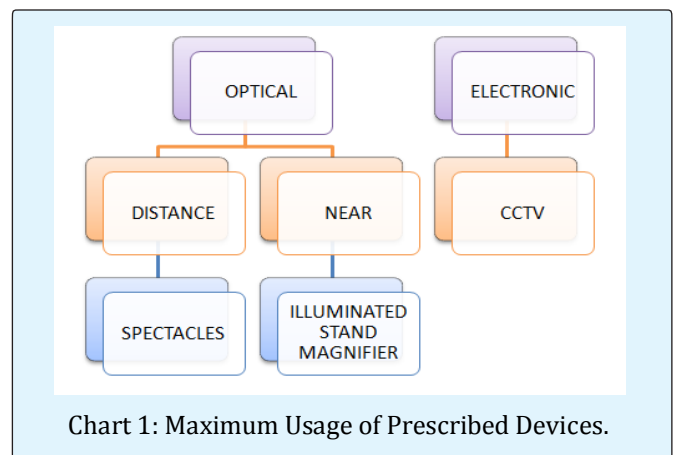


Chart 1: Maximum Usage of Prescribed Devices.

Discussion

As per the study, it can be concluded that patients having Buphthalmos can be treated by the Low vision Aids usually for near purpose and significantly it is improved. In case of Buphthalmos, usually all the ocular structures are involved and damaged significantly, because outflow system is obstructed. By the low vision aids, it is treated and patient's response is positive significance. So, low visual aids must be provided in cases of Buphthalmos.

Conclusions

In cases of Buphthalmos, vision can be enhanced by illuminated stand magnifier or CCTV for near and spectacle correction for distance.

References

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