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Short Communication

Delivering Care to Patients with Ocular Genetic Comorbidities among Low Vision

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ABSTRACT

By 2030, the Administration on Aging (AOA) estimates that the number of older adults in US will double to nearly 70 million over the age of 85. It is projected that the fastest growing segment, is 25% of these adults. They will experience vision loss that will severely impair their activities of daily living. For most, low vision embodies visual function deficits, due to acquired or congenital diseases for which apart from therapeutic aids, gene therapy, gene therapy drugs, therapy using stem cells and utilization of electronic devices can restore vision. Further, therapeutic aids include anti-infective drugs, antibiotics for treating visual loss. However, as such diseases cannot be ameliorated by traditional methodology such as eye glasses or contact lenses alone, specialized, combined, and training treatments have to be implemented. Thus, in this study such treating aids have been discussed.

Keywords: Relative distance magnification, Relative size magnification, Angular magnification, Ocular genetic comorbidities

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DESCRIPTION

The compensatory treatments are divided into the following-relative distance magnification, relative size magnification, and angular magnification (*Table 1*). To further elucidate these mechanisms spot or fluent magnification, light/contrast enhancement, glare control, orientation and mobility addressed activities of daily living adaptations, and counseling/support groups are included. Genomic armamentarium is often ignored in developing comprehensive individualized care plans. Therefore, analyzing, prescribing variables for low vision patients with genetic disorders will add to this study (Freeman P and Jose RT, 1997).

Table 1: Details of magnification

Magnification details	Distance
Relative distance magnification	3
Relative size magnification	28
Angular magnification	1

Along with therapeutic strategy, providing better care is also crucial. Thus, it is equally important to provide other strategies which have been discussed in this study are listed below-

- The functional status of the eyes/visual system and quantify vision loss has to be evaluated.
- Patients with functional impairment secondary to low vision have to be assessed, focusing on the impact of their eye disease and systemic health conditions (Macnaughton J, 2005).
- Providing appropriate low vision intervention with regard to patient's visual demands, needs, and adaptation to vision loss is vital.
    - Evaluation of potential use of residual vision.
    - Maximize use of adaptive capabilities for activities of daily living.
- Follow up care (as needed) inclusive of low vision instructions and training.
- To council and educate patients (Awareness) on their visual impairment status, including recommendations for treatment, management, and future care.
- To provide appropriate referral for services outside the scope of expertise of the low vision clinician.

Retrospective view-nested cohort study examining genetic ocular comorbidities

Ophthalmic preparations can be used to treat such comorbidities. It is crucial to take utmost care to regain vision loss despite of the use of pharmacological drug therapies. Thus, to provide better care, descriptive statistics were used from an urban hospital low vision comprehensive rehabilitation clinic (Ward 1) (Lund R and Watson GR, 1997). However, patients from ward 7 were mostly considered in this study. The originating cohort (parent) was patients referred from two specialty clinics, attendee and resident. Each clinic had the following subspecialties-glaucoma, retina, neuro-ophthalmology, comprehensive ophthalmology, and paediatrics.

A total of 42 patients as a group were selected who were treated with different antibiotic preparations to test the genetic ocular comorbidities. 73% (31 patients) of the total population were elder people (having age ≥ 65 years) while, 28% (12 patients) were of the age group, 12-65 years. All the patients were then trained and dispensed after testing their visual acuity (*Table 2*), where 16% were subjected to vision rehabilitation along with occupational therapy (Brilliant RL, 1999). It was found that the most incurred comorbidities were inherited optic nerve (Lebers) disease, Oculocutaneous Albinism (OCA) and vitelliform macular dystrophy (Best disease).

Table 2: Visual acuity classification

Visual acuity	LogMAR chart
Normal (20/10-20/25)	-0.3-0.1
Near normal (20/30-20/60)	0.17-0.47
Moderate (20/70-20/160)	0.54-0.9
Severe (20/200-20/400	1-1.3 or ≤ 20 degrees
Profound (20/500-20/1000)	1.4-1.7 and/or ≤ 10 degrees
Near total (≤ 20/1000)	1.7 and/or ≤ 5 degrees
Note: LogMAR: Logarithm of Minimum Angle of Resolution	

CONCLUSION

Overall, further studies need to be designed, developed, and implemented in order to elucidate and define about low vision genetic vision cohorts despite of the therapeutic treating aids. In addition, we can take steps to improve low vision preferential practice patterns for this subset of low vision population.

Although this study skewed more towards African American patient profiles with genetic based ocular comorbidities, it illustrates successful outcomes with certain practice patterns. These subjects seemed to prefer large print intervention with training and dispensing low-tech assistive devices. Therefore, securing evidence based data to influence and clarify low vision policies regarding "medical necessity" and "durable goods" is essential. These policies could provide Center's for Medicare and Medicaid Services (CMS) information when working towards Medicare coverage for hi-tech assistive devices and low vision services reimbursement and/or contribute to the literature regarding precision, personalized medicine.

REFERENCES

1. Freeman P, Jose RT. The art and practice of low vision. Butterworth-Heinemann. 1997.
2. Macnaughton J. Low vision assessment. Elsevier Health Sciences. 2005.
3. Lund R, Watson GR. The CCTV book: Habilitation and rehabilitation with closed circuit television systems. Synsforum. 1997.
4. Brilliant RL. Essentials of low vision practice. Butterworth-Heinemann. 1999.