



Importance of Questioning Occupation and Working Distance to Presbyopia Patients/Customers while Prescribing Near Addition

Komal Narkar¹, Ayswarya Mohapatra², Suneel Kumar Gupta³, Pratik Sharma³, Gaurav Dubey^{4*}, Jamshed Ali⁵, Shamit Pal⁵, Vibha Kumari⁶, Devanshi Dalal⁷

¹Optometrist, Lenskart, Mumbai, India; ²Founder, Eye Genics Vision Care Pvt Ltd, Mumbai, India; ³Department of Optometry, Faculty of Allied Health Sciences, Era University, Lucknow, U.P., India; ⁴Department of Optometry, Faculty of Paramedical Sciences UPUMS, Saifai, Etawah, U.P., India; ⁵Department of Ophthalmology, Maharishi Markandeshwar Institute of Medical Science, and Research, Mullana, Ambala, India; ⁶Batra Hospital, New Delhi, India; ⁷Bapubhai Desai Patel Institute of Paramedical Sciences, Charusat University, Gujarat, India.

ABSTRACT

Introduction: Blur vision for near objects that are gradually visible is an age-related, irreversible reduction in amplitude of accommodation leading to the condition of presbyopia. Presbyopia gets noticed at the age of 40-45 years. The mode of treatment is a convex lens of desired power as per working distance and accommodation left is prescribed to the symptomatic patients.

Aim & Objective: To lessen the trouble shootings of non-adaptation to the near addition in presbyopia patients/customers caused due to lack of occupation and working distance questioning.

Case Report: A 62-year-old Female patient visited Optical for a new prescription of distance as well as near power. The customer was a progressive lens wearer with a correction of RE: +0.50/-0.50*900 and LE: +0.75/-0.50*900 for distance and near addition of +2.25D with PGP VA of 6/6, N8 in both eyes. The customer was advised to continue the same distance correction and was prescribed +2.75D near addition in both eyes (N6) at a standard reading distance (40 cm).

Conclusion: This study focuses on the equal importance of proper questioning of working distance as well as the occupation to the customers/patients while prescribing near addition and not solely on age and amplitude of accommodation.

Key Words: Occupation, Distance, Presbyopia, Near Addition, Symptomatic Patient, Trouble Shooting, Patient Counselling

INTRODUCTION

Blur vision for near objects that is gradually visible is an age related, irreversible reduction in amplitude of accommodation leading to the condition of presbyopia.¹ Presbyopia gets noticed at the age of 40-45 years. Mode of treatment being convex lens of desired power as per working distance and accommodation left is prescribed to the symptomatic patients.² This is termed as near addition (NA). Ciliary muscle, refractive errors, working distance, habitual visual requirements, gender, illumination and temperature are causative factors for initiation of this condition.³ Patient's habitual working distance is crucial to determine the most suitable correction.⁴ Not everyone will accept lens powers given randomly or approximately, based on age.¹ A person with myopia (short-sightedness) many a time might require less presbyopia correction or may compromise removing their distance correction to see close. They should remove their distance spectacles if he wants to see at a close distance. On

contrast a hyperopia (far-sightedness) person may take presbyopia correction more than the expected age power or bring his working distance closer than 40 cm, or to see very small objects.

CASE REPORT

A 62-year-old female patient visited at XYZ optics for new prescription of distance as well as near power. The customer was a progressive lens wearer with a correction of RE: +0.50/-0.50*90° and LE: +0.75/-0.50*90° for distance and near addition of +2.25D with PGP VA of 6/6, N8 in both eyes. The customer was advised to continue same distance correction and was prescribed +2.75D near addition in both eyes (N6) at a standard reading distance (40cms). The customer was comfortable with the new prescription and was dispensed with same power in a progressive lens design with proper lens centration. Four days later the customer approached the shop with headache and eyestrain while reading/during near work

Corresponding Author:

Dr. Gaurav Dubey, Department of Optometry, FPS, SUPUMS, Saifai, Etawah, U.P., India.

Email: gauravopto25@gmail.com

ISSN: 2231-2196 (Print)

ISSN: 0975-5241 (Online)

Received: 18.07.2023

Revised: 30.07.2023

Accepted: 14.08.2023

Published: 31.08.2023

with new glasses. The new glasses were re quality checked in order to rule out whether the power was accurate. As the customer was a progressive lens wearer for a long time, and the distance power was the same as earlier, there was no chance of difficulty in adjustment to progressive lens design. The distance power was re-examined and had no changes. It was observed that on the revisit, the customer demonstrated her working distance up to 50-55cms. On counselling, the customer was asked about the need, work type and duration of the near work. The customer illustrated the near work of reading notes while playing a musical instrument and singing for a duration of 2 hours per day. Keeping the occupation and working distance in mind, the customer was prescribed with +2.50D addition (N6) in both eyes keeping the near target at the customer's working distance (i.e., 50-55cms).

Table 1: Near addition required as per the Patient Age

Age in years	Addition power
40-45	+1
45-50	+1.50
50-55	+2
55-60	+2.50
60-75	+3

DISCUSSION

The purpose of the study is to understand the needs of the patient/customer while prescribing the near addition along with keeping the age and amplitude of accommodation in mind. Proper counselling on the working distance and the addition given according to the distance should be done by the optometrist. The range of the working distance should be explained to the patient/customer. **Near add value remains usually static after +2.25D. The field of view gets smaller with need for more reading power.**⁴ In this case, the customer ideally needs wider field of view for which we can prescribe a slightly lesser addition power which will give satisfy the near power need as well as more area of view.⁵ This can vary with the person's occupation, residual accommodation and working distance. For example, a regular computer user might take a low add for doing computer work as he needs intermediate distance clarity. Whereas an embroidery worker might take a high add irrespective of his age as the working distance is closer than normal.

CONCLUSION

Near add dispensed depends on both the working distance and the residual power of accommodation in an individual. Counselling about the need, working type and duration of the work of the customers/patients is crucial in everyday practice in order to lessen the dispensing troubleshoots. Hence

this study focusses on the equal importance of proper questioning of working distance as well as the occupation to the customers/patients while prescribing near addition and not solely on age and amplitude of accommodation.

ACKNOWLEDGEMENTS

The authors acknowledge the immense help received from the scholars whose articles are cited and included in references to this manuscript. The authors are also grateful to authors/editors/publishers of all those articles, journals, and books from where the literature for this article has been reviewed and discussed."

Declarations

Source of Funding- This research did not receive any outside funding or support

Conflict of interest: None

Authors Contribution:

Komal Narkar- Data Collection

Ayswarya Mohapatra- Write-up

Suneel Kumar Gupta-Editing

Pratik Sharma-Grammar

Dr Gaurav Dubey- Review & Submission

Jamshed Ali-Proof Reading

Shamit Pal- Review of Literature

Vibha Kumar-Formatting

Devanshi Dalal- Review

REFERENCES

1. Cuiffreda KJ. Accommodation, the pupil and presbyopia. In: Benjamin WJ, editor. *Borish's Clinical Refraction*. 2nd ed. Missouri, USA: Butterworth-Heinemann-Elsevier. 2006; 128-31.
2. Keirl A. Accommodation and presbyopia. In: Keirl A, Christie C, editors. *Clinical Optics and Refraction*. London, U. K: Butterworth-Heinemann; 2007; 137-51. [Google Scholar]
3. MacMillan ES, Elliott DB, Patel B, Cox M. Loss of visual acuity is the main reason why reading addition increases after the age of sixty. *Optom Vis Sci*. 2001; 78(6):381-385.
4. Bittencourt LC, Alves MR, Dantas DO, Rodrigues PF, Santos-Neto ED. An evaluation of estimation methods for determining addition in presbyopes. *Arq Bras Oftalmol*. 2013; 76(4): 218-220.
5. Deepu S, Evon Selina K, Saban H, Nancy P, Satheesh STS, Thomas K, et al. Prescription of near addition and its relation to accommodative reserve in presbyopia - The dichotomy between theory and practice. *Indian J Ophthalmol*. 2021 July 69(3): 1702-1706