Original Research Article

Awareness about different modalities of correction for refractive errors in students attending MGM medical college, Aurangabad, India

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Abstract

Aim: To assess awareness about different modalities of correction for refractive errors in students attending MGM medical college, Aurangabad, India. **Materials and Methods:** 174 students attending MBBS in MGM medical college answered a predesigned questionnaire and the results were then analysed in form of percentage. **Results:** 174 students filled the questionnaire, amongst which 104 claimed to have a refractive error. Only 10 respondents were using contact lens and 2 had undergone corneal refractive procedure. 134 respondents were not aware about phakic IOL procedures, 58 respondents were not aware about corneal refractive procedures. 138 respondents claimed spectacles to be their preferred modality. **Conclusion:** Most of the young people are unaware about the newer modalities of correction of refractive errors. Further sensitization is required to increase awareness amongst the masses.
Key Words: Phakic IOL, Refractive errors, corneal refractive surgery.

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INTRODUCTION

Global estimates indicate that more than 2.3 billion people in the world suffer from poor vision due to refractive error; of which 670 million people are considered visually impaired because they do not have access to corrective treatment[1]. Refractive error is a treatable cause of visual impairment (<6/12 in the better eye) in 83% children in urban India,[2] 70% in rural India.[3] A refractive error can simply be diagnosed, measured, and corrected with the aid of optical corrective approaches and devices such as spectacles and contact lenses or by refractive surgical procedures.[4] Refractive errors are the most common forms of eye disorders that result in poor vision and have severe social and economic implications if uncorrected[5]. Correction of significant refractive error is a priority of Vision 2020: The Right to Sight, the World Health Organization's (WHO) Global Initiative for the Elimination of Avoidable Blindness[6] Rupert R A *et al*, reported that Older subjects and the more highly educated were more likely to wear spectacles; however, most spectacle wearers (81%) had inadequate correction.[7] Nagachandrika *et al*.; showed that complications are seen in 1/4 of the CL wearers. The most common complications encountered in this study were CL-induced papillary conjunctivitis (6.39%), corneal vascularization (4%), and SPK (3.5%). Patients wearing rigid GP lenses demonstrated fewer complications as compared to SCLs.[8] Although proper care and meticulous handling of the microkeratome during LASIK can prevent most flap complications, they have been reported in 0.04–10% of cases[9,10] All the possible corrective methods of refractive error have a social and economic impact on the patient including possible complications of prolonged contact lens use and refractive surgery. This study aims to assess the knowledge and practices of students of a medical college.
Study Design: Observational study

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MATERIALS AND METHOD

174 students attending MBBS course were included in the study and were asked to fill a pre-designed questionnaire regarding their knowledge, beliefs and practices about refractive errors, their possible correction modalities and their complications. The data was then compiled in Microsoft excel sheet and analysed in form of percentage.

RESULTS

174 students between the age group of 18 to 23 years participated in the study, amongst these were 94 female respondents and 80 male respondents. 46 respondents gave a positive family history for refractive errors. Vast majority of respondents (82) claimed to have visited the ophthalmologist only when needed. 29 respondents visited the ophthalmologist once in a year, 38 respondents visited once in 6 months and 25 respondents claimed to have visited the ophthalmologist as they were advised. 100 respondents were aware about all types of refractive errors. 106 respondents gave a history of being diagnosed with refractive errors in the past and they claimed the following as the reasons for visiting an ophthalmologist when they were diagnosed with a refractive error.

Table 1: Distribution of symptoms of respondents when diagnosed with refractive error

Symptom	No. of respondents	%
Headache	55	31.60
Blurring Of Vision	73	41.95
Eye Strain	47	27.01
Routine Visit	12	6.89

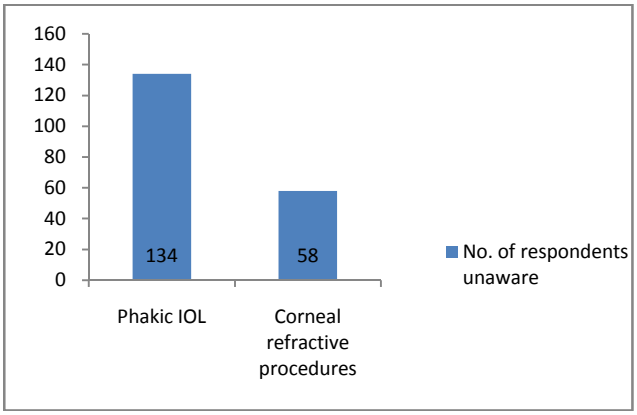

Figure 1: No. of respondents unaware of alternative treatment modalities

38 respondents were aware about all the possible modalities for correction of refractive errors. 104 respondents claimed that they use a correction modality and all 104 respondents claimed to have used spectacles. However 10 respondents claimed to use contact lens, 8 of those being females.

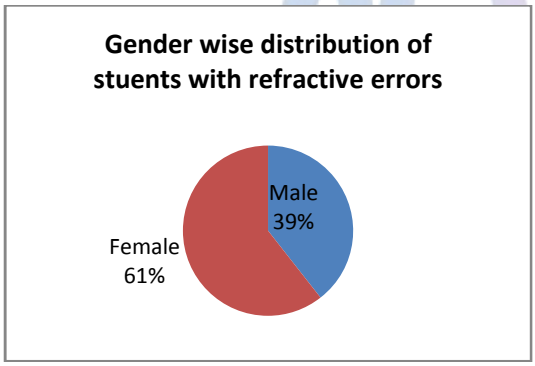

Figure 2:

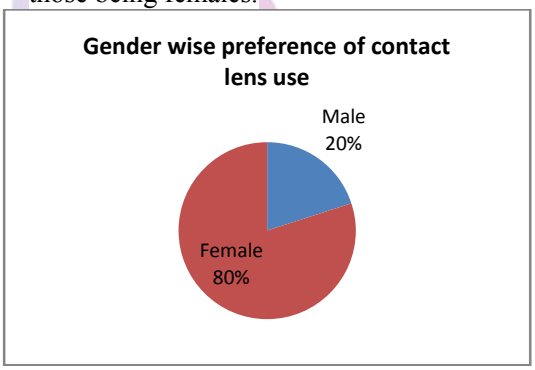

Figure 3:

73 out of 104 respondents were using their correction modality all day, whereas 12 respondents used it while reading and 15 respondents used it only when needed. 4 respondents claimed to use them irregularly. The reasons for not wearing spectacles have been enlisted in the following table.

Table 2: Reasons of not wearing spectacles by the respondents

Reason for not wearing spectacles	No. of respondents	%
Clear Vision	81	68.65
Social Stigma/Cosmetic	13	11.01
Cost	1	0.85
Botheration	23	19.49

Majority of the respondents had not considered any other choice of correction modality for their refractive error, however 43 respondents claimed to have been interested in using contact lens, 13 respondents in undergoing corneal refractive surgeries and 1 respondent for phakic IOL procedures. 31 participants were aware about all possible advantages of contact lens, however 66 respondents considered it cosmetically better accepted as the biggest advantage of contact lens. 65 respondents were aware about the possible complications of contact lens use and 85 respondents knew about the correct practice of hygiene while using contact lens. Only 2

respondents participating in the study claimed to have undergone corneal refractive surgery. 37 respondents were aware about possible weakening of cornea after refractive surgery, 27 respondents knew about the dry eyes caused after refractive surgeries. 36 respondents considered incomplete optical correction as a possible disadvantage and 45 respondents considered high cost of surgery the biggest disadvantage. However 50 respondents correctly considered all as possible disadvantages of corneal refractive surgeries.

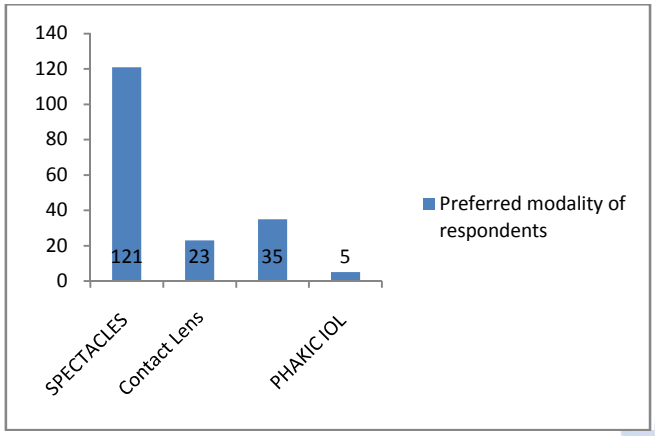

Figure 4: Preferred correction modality of respondents

DISCUSSION

This study highlights that spectacles are the preferred mode of correction of refractive errors. Use of contact lens is limited for cosmetic reasons only with more number of females opting for this however, vast majority of people are not aware about the correct hygiene practices associated with use of contact lens. Corneal refractive surgeries are gaining widespread popularity but the cost factor remains one of the hurdles in it's widespread use. Most people are unaware about the availability of phakic IOL procedures as a correction modality for refractive errors. This being a newer modality, has lack of coverage in the print media. High cost of procedure and rigorous surgical training required may be some of the reasons for this method not gaining much popularity amongst the youth. Further sensitization of the masses needs to be carried out regarding the various treatment modalities available for correction of refractive errors and the need for using the same as refractive errors still accounts for vast majority of disabling preventable blindness in our country.

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