



Study of Refractive Error Using Retinoscopy

Authors

Dr Neeta Bajaj, Md Mukhtar, Dr Dipali, Dr Sayli Sonawane

Introduction

Retinoscopy was done in 600 eyes of different age group study for type of errors in males and females was seen. Retinoscopy was done with suitable eye drops for different age groups.

Material and Methods

Patients divided into age groups ranging from 10-12 yrs: 12-30 yrs/ 30-40yrs/40-50yrs/50-60 yrs. Dilatation done with atropine ointment for 3 days below 12 ys age group.

Retinoscopy done on 4th day after dilatation of pupil and relaxing accommodation, Refractive correction given after 2 weeks

Between 12 to 40 yrs age group retinoscopy done with tropicamide plus eye drops 3times under full dilatation of pupil. Retinoscopy done on same day with streak Retinoscopy. Refractive correction given on 3rd day

Above 40 ys Tropicamide eye drops instilled 3 times Retinoscopy done with streak Retinoscopy under full dilatation. Refractive correction given after 2 days taking Retinoscopy into account and minusing the 1mt distance factor and Accommodative factor while giving refractive correction.

Observation and Results

Following were the results.

Between age group 10-12 yrs 206 eyes

Between 12-30 yrs 156 eyes.

Between 30-40 yrs 50 eyes.

Between 40-50 yrs 104 eyes.

Between 50-60 yrs 86 eyes had refractive error.

-Male to female predilection was as follows

Between 10-12 yrs it was more in males 2:1 ratio.

Between 12-30yrs it was more in females.

Between 30-50 yrs same in males and females.

Above 50 yrs again it was same in males and females.

-Refractive status in different age group was as follows

10-12 yrs age group out of 206 eyes 195 had myopia rest had hypermetropia with 1 case of myopic astigmatism

In age group 12-30 yrs out of 156 eyes 108 had myopic. astigmatism in addition to spherical correction 30 had only myopic astigmatism.18 eyes had hypertropia.

Between age group 30-40 yrs 104 eyes had refractive error. In this age group 60 eyes had compound hypermetropia 21 eyes had compound myopia and 19 had mixed astigmatism.

Between 50-60 yrs age group 86 eyes had refractive error out of which 44eyes had hypermetropia 10 had mixed astigmatism rest had compound hypermetropia.

Discussion

Retinoscopy was done in all cases with suitable dilating and accommodation relaxing drop according to age groups myopia was more in young children between 12--30 myopic astigmatism was observed. As age advanced hypermetropia and hometric astigmatism was predominant. Male to female ratio was not much significant except in 10-12 age group more male predominance seen, 12-30 age group more females predominance seen

Conclusion

It is definitely proved beyond doubt that Retinoscopy with full dilatation of pupil and relaxed accommodation is the best method to find refractive status of eyes especially to detect mixed astigmatism at any age groups and to give sharper vision

Reference

1. [Https://en.m.wikipedia.org](https://en.m.wikipedia.org)
2. [Https://aao.org](https://aao.org)
3. [Https://web.opth.u Iowa.edu](https://web.opth.u Iowa.edu)