



## Study of type of Refractive error in Paediatric age group using Retinoscopy

Authors

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### Introduction

Retinoscopy was done in 200 eyes of age group 0-12yrs to study the refractive status in children.

### Material and Methods

Patients divided into age groups ranging from 0-1yrs/1-2yrs/ 2-3yrs/3-4yrs/4-5yrs/5-6yrs/6 and above. 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

Spherical, cylindrical, mixed astigmatic refractive error with different power was observed in different age groups

### Observation and Results

Following were the results

Between age group 0-1 yrs 4eyes

Between 1-2 yrs 3 eyes.

Between 2-3 yrs 5 eyes.

Between 3-4 yrs 2 eyes

Between 4-5 yrs 12 eyes.

Between 5-6 yrs 20 eyes

Between 6-7 yrs 40 eyes

Between 7-8 yrs 44 eyes

Between 8-9 yrs 28 eyes

Between 9-10 yrs 32 eyes

Above 10 yrs 10 eyes

Refractive status in different age group was as follows

0-1 yrs age group out of 4 eyes, 4 had simple myopia

1-2 yrs age group out of 3 eyes, 3 had simple myopia

2-3 yrs age group out of 5 eyes, 5 had simple myopia

3-4 yrs age group out of 4 eyes, 2 had simple myopia

4-5 yrs age group out of 4 eyes, 12 had simple myopia

5-6 yrs age group out of 20 eyes, 20 had simple myopia

6-7 yrs age group out of 40 eyes, 39 had simple myopia, 1 had myopic astigmatism

7-8 yrs age group out of 44 eyes, 34 had simple myopia, 10 had myopic astigmatism

8-9 yrs age group out of 28 eyes, 23 had simple myopia, 5 had myopic astigmatism

9-10 yrs age group out of 32 eyes, 28 had simple myopia, 4 had myopic astigmatism

Above 10yrs age group out of 10 eyes, 8 had simple myopia, 2 had hypermetropia

-Refractive powers in different age groups were

0-1 yrs age group -Refractive power was below - 1.00 spherical

1-2 yrs age group -Refractive power was below - 1.00 spherical

2-3 yrs age group -Refractive power was below -1.00 spherical  
3-4 yrs age group -Refractive power was below -1.00 spherical  
4-5 yrs age group -Refractive power was below -1.50 spherical  
5-6 yrs age group -Refractive power was below -1.50 spherical  
6-7 yrs age group -Refractive power was below -1.50 spherical  
7-8 yrs age group -Refractive power was below -1.50 spherical  
8-9 yrs age group -Refractive power was below -2.00 spherical  
9-10 yrs age group -Refractive power was below -2.00 to -2.50 spherical  
Above 10yrs age group -Refractive power was below -2.00 to -3.00 spherical with variable astigmatic power for children with astigmatism

### Discussion

It has observed that children between 1-5 yrs of age had simple myopia below -1.00 spherical power

Children between 6-8yrs had simple myopia between power -1.00 to -1.50 and very few had astigmatism

Children between 8-10yrs had power between -1.00 to -2.00 simple myopia and few mixed astigmatism

Children above 10yrs of age showed few mixed astigmatism and power ranging from -1.50 to -3.00 and astigmatism of different power

### Conclusion

Simple myopia was predominantly seen in paediatric age group with astigmatism as age advanced was observed .Mixed astigmatism was observed in later paediatric group

### Reference

1. <http://www.imo.org>
2. <http://www.aao.org>
3. <https://www.ncbi.nlm.nih.gov>