VISUAL ACUITY AND ASSOCIATIONS IN CHILDREN WITH HIGH HYPERMETROPIA

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BACKGROUND
• High hypermetropia is defined as > +4.5 dioptres
• It is associated with isometropic amblyopia in 4-9% of children
• 64 - 84% of children with high hypermetropia have an esotropia
• 21% are reported to have a systemic association

AIM
• To report the visual results and the ocular and systemic associations of children with high hypermetropia

METHOD
• Children with hypermetropia > 5 dioptres were identified from a paediatric ophthalmology database
• Age, gender, visual acuity, refraction, presence of strabismus, duration of follow up and any systemic associations were recorded
• Children with < 6 months follow up or where a crowded acuity could not be recorded were excluded

RESULTS
• 103 children included, 57 of them boys
• The mean age at presentation and final follow up was 3.6 ± 1.9 years and 6.3 ± 1.8 years respectively
• Mean follow up of 33 ± 21 months (range 6 -124 months)
• Mean hypermetropia was 7.07 ± 1.5 dioptres
• 50% of children had an esotropia
• Mean presenting acuity was 0.46 ± 0.28 LogMAR
• Mean final visual acuity was 0.21± 0.15 LogMAR.
• There was a significant association between the degree of hypermetropia and the final visual acuity (P<0.05)
• There was no association between the age of presentation and the final visual acuity
• Residual amblyopia was present in 34%
• 11 children had developmental delay or a syndromic condition

CONCLUSION
• A third of children with high hypermetropia have residual amblyopia.
• A significant number of children have strabismus

REFERENCES

DISCLOSURE
No competing interests

DISCUSSION
• The prevalence of residual amblyopia in this study reinforces reports of suboptimal visual outcomes in high hyperopes
• Carers of high hyperopes can be better informed at the outset of treatment regarding the possible visual outcomes and associations of high hypermetropia

PERCENTAGE OF PATIENTS WITH STRABISMUS

<table>
<thead>
<tr>
<th></th>
<th>Esotropia</th>
<th>Exotropia</th>
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<tbody>
<tr>
<td>0%</td>
<td>50%</td>
<td>4%</td>
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PERCENTAGE OF PATIENTS WITH AMBLYOPIA

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Unilateral</th>
<th>Bilateral</th>
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<tbody>
<tr>
<td>0%</td>
<td>34%</td>
<td>11.70%</td>
<td>22.30%</td>
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