**INTRODUCTION**

- Eye strain is a commonly encountered ophthalmic symptom.
- Eye strain may occur in older children and adults with strabismus.
- The factors associated with eye strain in strabismus have not been well studied.

**METHODS**

### Assessment of Eye strain

- Eye strain was assessed by the patient using a standardized questionnaire.
- Spontaneous-type frequency scale: "never," "rarely," "sometimes," "often," and "always."

### Analysis

- Eye strain ratings were converted to a score of 0 to 5 points (never to always)
- Correlations between magnitude of deviation (SPCT) and eye strain calculated using Spearman rank methods
- Mean eye strain scores compared using t-tests for each characteristic (having vs not having)

### Demographics of 66 Patients Enrolled

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (range)</td>
<td>13 to 82 years</td>
</tr>
<tr>
<td>Sex</td>
<td>Male 42%, Female 58%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>98% Non-Hispanic or Latino</td>
</tr>
<tr>
<td>No. of Patients</td>
<td>66</td>
</tr>
</tbody>
</table>

**RESULTS**

### Relationship of Eye Strain and Deviation Magnitude

- No significant correlations were found between the magnitude of deviation and level of eye strain

### Relationship of Eye Strain and Presence of DVD

- Eye strain does not appear to be related to DVD

### Relationship of Eye Strain and Previous Surgery

- Eye strain does not appear to be related to previous surgery

### Relationship of Eye Strain and Motor fusion

- Eye strain may be slightly greater in subjects with motor fusion

### Relationship of Eye Strain and Sensory fusion

- Eye strain does not appear to be related to sensory fusion status

### Relationship of Eye Strain and Strabismus Type

- Eye strain is greater in patients with childhood-onset strabismus

### Relationship of Eye Strain and Microtropia

- Eye strain is greater in subjects with microtropia

### Relationship of Eye Strain and Presence of DVD

- Eye strain does not appear to be related to DVD

### Relationship of Eye Strain and Previous Surgery

- Eye strain does not appear to be related to Previous Surgery

**DISCUSSION**

- In older children and adults with childhood-onset strabismus, eye strain appears to be associated with small angles of misalignment.
- The association of microtropia with eye strain may be mediated by motor fusion.
- Future studies might explore the fusional reserve ratios in these patients.
- If inadequate motor fusion is a cause of eye strain, then it might be worthwhile exploring prisms, fusion exercises, or surgery as a treatment option.

**REFERENCES**


**CONCLUSIONS**

- Older children and adults with childhood-onset strabismus commonly experience symptoms of eye strain.
- Symptoms of eye strain appear to be associated with microtropia and motor fusion.

**SUPPORT**

- None (All Authors)

**DISCLOSURE**

- None (All Authors)