The management of anisometropia: what factors play a role?

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Anisometropia is the most common cause of aniseikonia, resulting in asthenopia-like symptoms. Headaches, difficulty reading, and diplopia are all complaints we wish to avoid. Managing anisometropia properly is essential to prevent binocular disturbances. What are some factors that play a role, and what are our management options?

Factors

Magnitude

- A rule of thumb to follow for clinically significant anisometropia is: ≥1.50 D of hyperopia, ≥2.00D of astigmatism, and in some cases ≥2.00 D of myopia. Moderate amounts of anisometropia, especially hyperopic, are likely to be the most symptomatic. For smaller amounts, fusion is possible, whereas with larger differences, suppression is likely and will also be asymptomatic.¹

Age

- For infants and children, managing anisometropia during the sensitive visual development period is critical to avoid developing amblyopia. Treatment of the anisometropia refractively is the first step, followed by treating the amblyopia.²

Iatrogenic

- Cataracts, post-retinal detachments, and post-lasik monovision may all induce symptomatic anisometropia that was not there before. Consults for these surgeries should include education on the possible symptoms and limitations of correction, especially if suppression is present.³

Management

Contact lenses

- By far, contact lenses are the preferred treatment choice due to the minimal amount of image disparity between the two eyes. This goes for both pediatric and adult patients.⁴,⁵

Glasses

- When contact lenses are contraindicated, slab off prism may help to reduce aniseikonia. Adjusting the prescriptions for tolerance and having two sets of glasses for presbyopes are also options. Glasses are an acceptable choice for small amounts of anisometropia, but are less ideal for moderate amounts.⁶

Surgery

- Refractive surgery is effective when both eyes are corrected. Cataract surgery is typically done one eye at a time, so adjustments may be necessary and may include PRK.⁷,⁸

References:

Dr. Noha Seif received her Doctorate of Optometry degree from the Illinois College of Optometry. After working in private practice, she developed an interest in specialty contact lens fittings. She is currently completing a medical contact lenses fellowship at the Casey Eye Institute in Portland, Ore. Her interests include scleral lens fittings and anterior segment disease management in post-surgical and pediatric patients.

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