



Aniseikonia- Easy to Understand

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Authors' contributions

This work was carried out in collaboration between both authors. Author PHC wrote the introduction and conclusion part of this article. Author BHS managed the abstract and literature review along with the formatting of the article. Both authors read and approved the final manuscript.

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ABSTRACT

This article includes Introduction, Clinical Features, Determination, and Management of Aniseikonia including Knapp's Law.

Keywords: Aniseikonia; eyesight; retina; ocular image; ocular disease; glaucoma.

1. INTRODUCTION

It is a condition where the different ocular image size is present between two eyes. When there is a difference of 0.75% or higher between two image size, then it is considered as the considerable amount of Aniseikonia.

It is of two types:

Static Aniseikonia
Dynamic Aniseikonia

When only two retinal image size difference is present, then it is called Static Aniseikonia. During considerable amount of Anisometropia, when the patient is wearing a spectacle

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correction and when a patient is asked to look at different gaze, At that time, at different gaze, different amount of phoria is induced. The amount of induced phoria is assessed in Dynamic Aniseikonia [1].

2. KNAPP'S LAW

It is applicable only in cases of Axial Ametropia. But it is also proved that this law is not useful.

According to Knapp's,

Axial ametropic eye's retinal image size is equal to the emmetropic eye when proper corrected spectacle lens is placed on the anterior focal point of the Axial Ametropic eye [2].

3. CLINICAL FEATURES

Symptoms include Asthenopia, Headaches, Photophobia, Reading Difficulty, Nausea, Motility difficulty, Nervousness, Dizziness, General Fatigue, Distortion of space.

Aniseikonia is not always associated with refractive error. In some cases, there is no refractive error difference between two eyes, but unequal retinal image size is present. In this case, different corneal power is present between the two eyes which creates Anisometropia, which is very difficult to correct [3].

4. DETERMINATION OF ANISEIKONIA

The following tests can determine aniseikonia:

- A. Alternate Cover Test
- B. Turville Test
- C. Maddox Rod and Two Point Light Source
- D. The New Aniseikonia Test

A. Alternate Cover Test

Here the horizontal target is used to perform the test. A patient is instructed to look at the target. Here, occlude should not be placed on the eye for more than 1 sec.

B. Turville Test

Vertical Aniseikonia is diagnosed in this test.

C. Maddox Rod and Two Point Light Source

Here two light sources are placed at 60 cm distance and the difference between two light source is 20 cm. Maddox Rod is placed at 180-degree axis on one eye. Patient has to compare Relative Separation of the lights with Relative Separation of the Luminous Streak [4].

5. MANAGEMENT

- I. Proper Retinoscopic refraction along with Cycloplegic Refraction.
- II. Size lens is being prescribed. Size lens is a lens in which vergence is zero, and only magnification occurs. This lens is prescribed to the eye where Retinal Minification is present as compared to the other eye.
- III. Iseikonic lenses should be prescribed.
- IV. Vertex distance is also an essential factor for Aniseikonia. The change in vertex distance achieves magnification.
- V. The base curve is also an essential factor. To change base curve, magnification is needed.
- VI. Anti Reflection Coating and Lens Edge Coating is also an essential factor for Aniseikonia [5].

6. CONCLUSION

Aniseikonia is a binocular phenomenon. Complain of patients with Aniseikonia are diplopia, headache.it can be treated with the help of SIZE Lens. Before prescribing this size lens, a refractive error should be corrected. Size lens should be specified in an eye where a smaller image is perceived. This size lens will do magnification only, not any type of vergence.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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