

w : Anisocoria; Pupil size; Eyes

Anisocoria can be categorized into physiological and pathological types. Physiological anisocoria is relatively common and refers to a slight difference in pupil size that is usually benign and does not indicate disease. It is found in approximately 20% of the population and is typically of no clinical significance [1,2].

Pathological anisocoria, on the other hand, arises from underlying health conditions. The causes of pathological anisocoria can be broadly classified into three main categories:

These include disorders affecting the autonomic nervous system or central nervous system. For instance, Horner's syndrome is caused by disruption in the sympathetic nerve pathway and is characterized by a constricted pupil on the affected side, along with ptosis (drooping eyelid) and anhidrosis (lack of sweating). Another neurogenic cause is oculomotor nerve palsy, which can result from a variety of conditions including aneurysms, tumors, or trauma, and is often associated with a dilated pupil and possible eye movement abnormalities.

These are related to direct involvement of the eye itself. For example, acute glaucoma can lead to a mid-dilated, unreactive pupil due to increased intraocular pressure. Uveitis, an inflammation of the uvea (the middle layer of the eye), can also cause anisocoria. Intraocular inflammation can disrupt normal pupil response and lead to asymmetry [3-5].

Certain medications or substances can induce anisocoria. For instance, eye drops used for glaucoma treatment or dilation can cause temporary differences in pupil size. Additionally, systemic medications such as anticholinergics or sympathomimetics can affect pupil diameter.

Accurate diagnosis of anisocoria involves a thorough clinical evaluation. The diagnostic process typically includes collecting a detailed history of onset, duration, and progression of anisocoria, as well as associated symptoms like headaches, vision changes, or neurological signs, helping in narrowing down the potential causes.

Citation:
