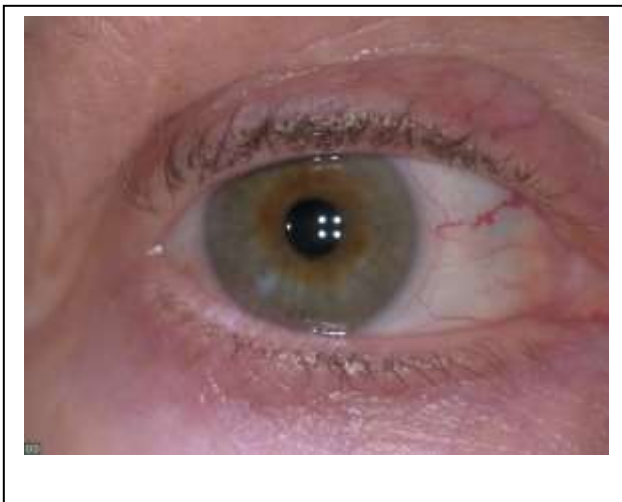


## Holmes-Adie Pupil or TONIC PUPIL SYNDROME

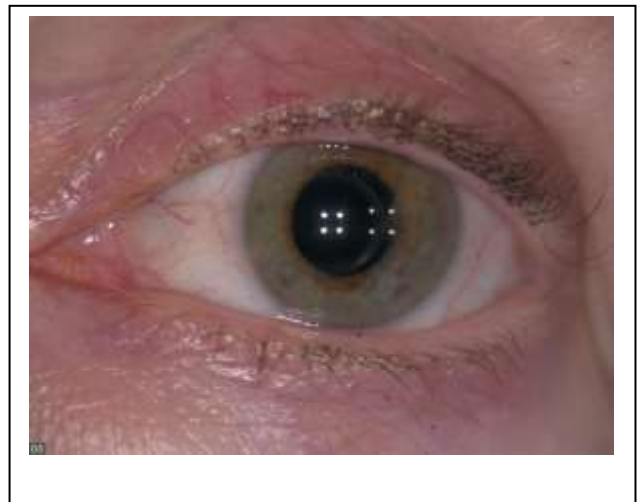
Tonic pupil is a benign condition that, in the absence of other signs and symptoms, heralds no neurologic or systemic disease state. The association with diminished deep tendon reflexes is the well-known Holmes–Adie syndrome.

Although symptoms of unilateral defective accommodation may prompt an office visit, the difference in pupil size usually is the more dramatic signal. Characteristically, the involved pupil is larger than its fellow, but if viewed in darkness, it actually may be the smaller one because the normal pupil is free to dilate widely: because both dilatation and constriction are defective in the involved eye, the diameter of the normal pupil may be smaller (in bright illumination) or larger (in dim illumination) than the tonic pupil.

With the passage of time, the anisocoria becomes less marked as the initially large tonic pupil gradually becomes less dilated and eventually even miotic over the years .



Right eye  
Right eye post 1% pilocarpine



Left eye unreactive pupil  
Left eye after 1% pilocarpine



## **Characteristics of Tonic Pupil Syndrome**

Relative mydriasis in bright illumination

Poor to absent light reaction

Slow contraction to prolonged near-effort

Slow redilation after near-effort

Iris sphincter sector palsy

Segmental vermiform movements of iris border

Defective accommodation

Pupil constricts with pilocarpine 0.125%

Associated with diminished deep tendon reflexes

Thus this is a benign condition that does not need further investigating.

Treatment can be with 1% pilocarpine eye drops four times a day. Piolgel is no longer available.

Nicholas Lee 2001 with extracts from Duanes Ophthalmology and Practical Ophthalmology.