

## Ophthalmology Snapshot

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### *History*

A nine-year-old, female Shih Tzu had presented with left buphthalmic eye. She had a history of chronic glaucoma (left eye), which had been treating with topical hypotensive medication for several months. Her right eye is normal.

From ophthalmic examination, the dog had loss vision of the left eye. Her intra ocular pressure was in early 30 mmHg. There were redness of the conjunctiva and pigmentation of the cornea. Bands of dark region were noticed posterior to the corneal limbus (Fig 1). Fluorescein staining test was positive. Palpebral reflex was complete but slow.



**Figure 1** Left eye of the Shih Tzu; an arrow pointing to a band of dark region.

(For better quality of photographs, please visit the TJVM website)

### *Question*

What is the band of dark region of left eye?

Please turn to next page for the answer.

**Answer**

Thinning of the sclera

**Comments**

Sclera is the white part of the eye that covers most part of the globe. It comprises of three layers; episclera (the uppermost layer of loose connective tissue next to the conjunctiva), sclera proper (the middle layer lining with dense white connective tissue) and lamina fusca (the innermost layer with elastic fibers). Sclera is responsible for maintaining shape of an eyeball, protecting eyeball from damage and sturdily attaching of extraocular muscles.

Thinning of the sclera in this case is due to prolonged increase intra ocular pressure in chronic glaucoma. Enlargement of globe results in thinning of the equatorial sclera that may progress to uveal herniation (equatorial staphyloma) and scleral perforation. The longer elevation of intra ocular

pressure, the thinner the sclera will be. Observation is advised if asymptomatic or no evidence of perforation. To avoid unwanted complications of scleral thinning condition, surgical intervention for chronic glaucoma is recommended to permanently reduce intra ocular pressure. Surgical patch graft can be considered to reinforce the thinning sclera.

**Reference**

- Gillian J. McLellan "Glaucoma in Dogs and Cats: Recognizing the Signs and Determining the Cause." [Online]. Available: [www.vin.com/apputil/content/defaultadv1.aspx?id=5124201&pid=11343](http://www.vin.com/apputil/content/defaultadv1.aspx?id=5124201&pid=11343) Accessed 2011.
- Vijay P, Jayaram S, Hrishikesh A and Manu T, 2016. Management of Scleral Thinning: an alternate approach. Nitte University Journal of Health Science. 6 (1): 88-90.