

Achromatopsia in a Shih-Tzu: A Case Report

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1. Purpose: To Describe a case of Achromatopsia in an adult Shih-Tzu dog

2. Materials/methods: A 5 year old, male neutered Shih-Tzu was evaluated for a reported 3 month history of vision loss that was worse on walks during daylight hours. A complete ophthalmic examination was performed including slit-lamp biomicroscopy (Kowa SL-17) and indirect ophthalmoscopy (Keeler Vantage Plus). Electroretinography (ERG) was subsequently performed under sedation (RETevet).

3. Results: Slit-lamp biomicroscopy and indirect ophthalmoscopy were normal. Menace response was absent in the left eye and inconsistent in the right eye. Pupillary light responses (PLRs) were slow and incomplete to white and red light but complete to blue light. Obstacle course navigation was normal in both room light and scotopic conditions. During dark adaptation for ERG testing menace response was noted to progressively return and was considered normal in both eyes in scotopic conditions. ERG scotopic responses were normal in both eyes. The right eye recorded a photopic response but with severely diminished amplitude; the left eye had no detectable photopic response.

4. Discussion: The clinical and ERG findings supported a diagnosis of achromatopsia. A single case report for this disease in the Shih-Tzu breed exists. The somewhat asymmetrical nature of the disease and late onset are atypical. Limited information was able to be obtained regarding the health of the dog's dam and the vision status of other dogs from the same litter. Some toxins have been identified in the human literature as causing selective damage to cones. A non-genetic cause for loss of cone function in this case cannot be excluded.

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