

**TITLE**

**Anterior uveal osseous metaplasia in a guinea pig.**

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**Purpose:** This study aims to describe the clinical course over a two year-period of an osseous metaplasia of the ciliary body and its histopathological features in a guinea pig.

**Material/Methods:** Follow-up over 2 years of the ophthalmic symptoms and then post-mortem histological evaluation of the lesions were performed.

**Results:** A healthy and alert two year-old male guinea pig presented for evaluation of the right eye. On ocular examination, vision was considered normal and biomicroscopy revealed an opaque arc of whitish tissue at the root of the right iris which seems to infiltrate the iridocorneal angle (ICA). Blood chemistry was normal and a suspicion of heterotopic bone formation of the ciliary body was made. No treatment was undertaken. Two years later, the whitish aspect of the right iris was reaching its pupillary area, inducing a mild vascular reaction and the left iris started to show invasion of the ICA. The animal was euthanatized, both eyes were collected and processed for histologic examination. Microscopically, bone tissue was present circumferentially in both irises. In the most severe affected eye, the bone surelevated and replaced some ciliary body tissue, expanding into the anterior chamber and occluding the ICA. The bony tissue also extended over the anterior iris surface and Descemet membrane. In the ciliary body, the bony tissue spared a thin band of stroma lined by the bilayered ciliary epithelium. The bony spicules contained vascular spaces and hematopoietically active bone marrow, and was focally surrounded by a thin fibrous envelope. Histological diagnosis was anterior uveal osseous metaplasia.

**Conclusion/Discussion:** Various terms as « osseous metaplasia », « osseous choristoma » « pathologic ossification » and « heterotopic bone formation » have been used in the literature to describe this clinical entity. The term choristoma refers to normal tissue in an abnormal location, but usually implies a congenital or developmental process. Osseous metaplasia implies alternative differentiation of a cell type into another cell type as a response to some stimuli. To the author's knowledge, this term better corresponds to the description of this disorder.