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## CLINICAL, ULTRASONOGRAPHIC AND HISTOPATHOLOGIC FINDINGS IN SEVEN HORSES WITH DESCMET'S MEMBRANE DETACHMENT

### Introduction

Descemet's membrane detachment (DMD) is infrequently reported in horses. The aim of this study is to describe the clinical, ultrasonographic and histopathologic findings in a series of seven horses with DMD.

### Material and Methods

Case records of horses, presented to the Department of Equine Sciences of Utrecht University between 2012 and 2017 and diagnosed with DMD on ultrasonography were reviewed.

### Results

Seven horses were included in the study, Breeds included two Dutch Warmblood Horses, two Icelandic horses, one Appaloosa, one Welsh Pony, and one pony of unknown breed. Median age at presentation was 14 years (range 11-24). Clinical signs were unilateral in all horses and included; blepharospasm and epiphora (5/7), moderate to severe focal or diffuse corneal edema (7/7), corneal stromal bullae (5/7), corneal neovascularization (4/7), buphthalmos (4/7), Haab's striae (2/7), corneal endothelial precipitates (1/7), fibrin in the anterior eye chamber (1/7), pigment deposits on the anterior lens capsule (1/7) and a single, linear, refractile corneal opacity (1/7). During transpalpebral ultrasonography, a marked linear echogenic structure was noted in the anterior eye chamber parallel to the posterior lining of the cornea. It converged with the posterior cornea in the periphery. In all cases the cornea was severely thickened and echogenic, consistent with the corneal edema, and DMD was suspected. In all horses, clinical signs progressed and the affected eye was eventually enucleated. Six eyes were examined histopathologically, and DMD was confirmed in all.

### Conclusions

In our case series, ultrasonography was a valuable tool for evaluation of the posterior cornea for DMD in horses with moderate to severe corneal edema. Concurrent eye diseases included uveitis and glaucoma, however, the exact cause of DMD remains unknown. Prognosis for globe retention in eyes with DMD was poor in our study.