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LAMELAR KERATOPLASTY IN DOGS USING EQUINE FETAL MEMBRANE AS A GRAFT. EXPERIMENTAL STUDY.

(C.A.L.Godoy¹, J.L. Guerra², P.S.M. Barros¹) ¹ Ophthalmology Section, Department of Surgery, School of Veterinary Medicine, University of São Paulo, São Paulo, Brazil; ² Department of Pathology, School of Veterinary Medicine, University of São Paulo, São Paulo, Brazil. Purpose: To evaluate the applicability of the equine fetal membrane (amniotic membrane, corion and allantoid) as a graft in lamellar keratoplasty in dogs. Methods: 9 mixed-breed dogs were used, according to the ARVO statement for use of animals in ophthalmic and vision research. Superficial keratectomy was performed with a 5mm trephine and a 6 mm in diameter fragment of the fetal membrane was sutured in place with 8-0 nylon simple interrupted sutures. Clinical exams were performed during 2, 7, 15 and 60 days and, afterwards, the animals were euthanized; the eyes were enucleated for histological study. Results: Clinically, one could observe slight corneal edema close to the implant from the early phases, until the middle stage of the investigation. The neovascularization appeared progressively; its higher intensity was observed at the intermediate phase, disappearing gradually. At 60 days, one could notice a macula in the surgery site. The histological findings showed epithelization and perfect integration of the graft to the receptor tissue at early stages; the cellular and vascular reactions were more intense in this phase. On day 15, the vascular elements were reduced in relation to the matrix and cellular elements. We did not find any inflammatory infiltrate in the graft, as well in the site of the suture at any stage. Conclusions: The equine fetal membrane (amniotic membrane, corion and allantoid) can be useful as graft in lamellar keratoplasty in dogs.