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Service (sector) Glaucoma - Patologia Ocula N° CEP

### **Histopathological findings in corneas with Acanthamoeba keratitis**

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Purpose: To describe the histopathological findings in corneas with Acanthamoeba keratitis. Methods: Fifteen cases of Acanthamoeba keratitis sent to the Ophthalmic Pathology Laboratory (UNIFESP) between 2000 and 2003 were studied. All the specimen were fixed in formalin and submitted to routine histologic preparation, included in paraffin block and the sections stained by hematoxylin and eosin (H&E), periodic acid Schiff (PAS) and Grocott's methenamine silver. Results: Histopathologic examination disclosed the Acanthamoeba cysts in the sections stained by PAS in all the 15 studied cases. The cysts were observed in the stroma in areas with or without inflammation. The corneal epithelium was absent in 05 (33%) and atrophic in 03 (20%) of 15 cases. Thickening of basement membrane was observed in 01 (6%) case. Bowman layer was absent in 03 cases (20%) and discontinued in 01 case (6%). In the stroma, necrosis occurred in 05 cases (33%), neovascularization in 04 cases (26,6%), chronic inflammatory reaction in 10 cases ( 66%), acute inflammatory reaction in 03 cases (20%) and edema in 03 cases (20%), The Descemet membrane was intact in 04 cases (26,6%), the iris pigments adhered was seen in 01 case (6%) and inflammatory exsudate in 01 case (6%). The absence of the endothelium was noted in 02 cases (13%) and melanin pigments adhered in 01 case (6%). Associated secondary infection caused by Gram positives coccus was seen in 01 case (6%) and filamentous fungus in 01 case (6%). Conclusion: The most frequent finding associated to the presence of Acanthamoeba was the chronic inflammatory reaction in the stroma, but the Acanthamoeba cysts can be seen in areas with no inflammation. In two cases were observed associated secondary infection by bacteria and filamentous fungal.