



CÓRNEA, CATARATA, ONCOLOGIA OCULAR

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CORNEAL CONFOCAL MICROSCOPY IN UREMIC NEUROPATHY: A PILOT STUDY

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Introduction:

Objective findings of peripheral neuropathy in patients with chronic kidney disease (CKD) are frequent, although most of them are asymptomatic. Corneal confocal microscopy (CCM) is a useful tool in the analysis of the corneal nerves and is being studied as method of diagnosis in diabetic neuropathy. The purpose of our study is to analyze the contribution of CCM for peripheral neuropathy diagnosis in patients with CKD.

Methods:

A prospective study was conducted in 10 patients (10 eyes) with pre-dialysis CKD and 10 aged-matched healthy volunteers (10 eyes). A complete ophthalmologic examination and neurological evaluation were performed in each patient. Corneal sensitivity was tested using a Cochet-Bonnet esthesiometer, and in vivo CCM of the sub-basal nerve plexus with Heidelberg Retina Tomograph II/Rostock Cornea Module.

Results:

There was a reduced corneal sensation in patients with CKD. The sub-basal nerve plexus morphology differed in the two groups, with a reduction in fiber density and length, lower branch density and increased nerve fiber tortuosity in patients with CK ($p < 0,05$).

Conclusion:

In our study, patients with CKD had changes in corneal nerve morphology and function. The use of CCM in the evaluation of neuropathy in patients with CKD may be useful and should be validated with further studies.