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PTK and Mitomycin C in Adenoviral Infiltrates : Partial Results

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PURPOSE: Pre and postoperative evaluation of patients with subepitelial fibrosis caused by adenoviral infiltrates submitted to phototherapeutic keratectomy(PTK) using mitomycin C.

PATIENTS AND METHODS: This prospective, consecutive cases series included patients with uncorrected visual acuity (UCVA) worse than 20/40 caused by central nummular adenoviral infiltrates. They were submitted to pre and postoperative ophthalmologic examination including Ocular Responder Analyzer hysteresis®, Pentacam®, Ultrabiomicroscopy (UBM) and optical coherence tomography (OCT-Visante)®. Transepithelial phototherapeutic keratectomy using LadarWave® excimer laser with balanced saline solution mask, plus mitomycin C 0.002% for 1 minute was performed. Postoperative follow-up visits were done in day 1, 3, 7,14,30,90 days.

RESULTS: 13 eyes of 9 patients (6 women and 3 men), with mean age 41,1 ± 14, 7 (range 20 to 65) presented preoperative mean spherical equivalent (SE): -0.12 ±0,86 D, and +1.72±1,18 D(1st month). Postoperatively, UCVA improved to equal or better than 20/40 in 76,9% and best spectacle corrected visual acuity (BSCVA) was 92,3% with gained of one or more visual lines. No patients lost visual lines. Mean corneal opacity thickness was 164,5 micron (m) at UBM, 157,7 m at Pentacam and 148,8 m with OCT preoperatively. Ablation depth was calculated considering 50m of epithelium plus 10% of total opacity, therefore mean programmed ablation was 65,14m ± 1,99. Mean central pachymetry was 491m before and 437,9 m after surgery(1st month). Pre and postoperative values of corneal total volume reduced from 55,24 to 53,29 mm3 and partial volumes at 3, 5, 7 mm diameter changed to 3,54 to 3,25 , 10,44 to 9,64 and 22,52 to 21,27 mm3, respectively. The coefficient of hysteresis change from 8, 91±2, 25 to 7, 6±1,78(1st month).

CONCLUSION: Partial results in this study show that PTK with mitomycin C for fibrosis caused by adenoviral infiltrates is an option for treatment when clinical approach failure.