

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo PIBIC

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Service (sector)

Cataract

Nº CEP

Comparative Study of the endothelial Cell Density After “ Divide and conquer” and “Quick-chop” Phacoemulsification Techniques: preliminary results.

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Purpose: To verify and to compare the reduction of the central endothelial cell density after “Divide and Conquer” and “Quick-chop” Phacoemulsification Techniques.

Setting: Hospital Universitario Clementino Fraga Filh (HUCFF), UFRJ, Rio de Janeiro, Brazil.

Methods: The first 58 patients examined at the out patient Clinic of the HUCFF by Dr. Flavia Domingues (FD) between May and October of 2000 with indication for phacoemulsification surgery were selected for this study and informed consent agreement. The inclusion criteria were: presence of senile grade II cataract, best corrected visual acuity of 20/40 or worse, age over 50 years and pre-operative central endothelial cell density greater than 1500 cell/mm².

Exclusion criteria were: secondary and complicated cataracts, diabetic, pre operative endothelial diseases, associated ocular diseases (glaucoma, trauma, uveitis), contact lens wear, pre operative central endothelial cell density lower than 1500 cell/mm², previous ocular surgeries, intra or post operative surgical complications. These patients were separated in two randomized groups and operated by the “Divide and Conquer” (group one) or “Quick-Chop” (group two) phacoemulsification techniques performed by the same surgeon (FD) with the Universal II phacoemulsificator (Alcon Instruments). The non-contact specular microscope Topcon SP 2000-P determined the central endothelial cell density pre operatively and after 30, 90 and 180 days after the surgeries. The results were studied and compared between the two groups.

Results: The postoperative exams are still being performed. The average of total time of ultrasound foot pedal used in the “Divide and conquer” group was 2.09 minutes and in the “quick-Chop” group was 1.05min. So far, we have the 30 days post operative specular microscopy of 33 patients, 16 from “Quick-chop” (group two) with 30.59% cell density reduction. We have also the 90 days postoperative specular microscopy of 17 patients, 9 from “Divide and Conquer” (group one) with 18.54% cell density reduction and 8 from “Quick-chop” (group two) with 30.11% cell density loss.

Conclusion: We are presenting the preliminary results of our study suggesting that the "Divide and conquer" technique is being less aggressive to the endothelium.

Some postoperative exams of 30 days and most of 90 and 180 days are not available up to the present moment. Probably these missing exams are critical to bring us any conclusive result.