( ) R1 ( ) R2 (X) R3 ( ) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( ) PIBIC Last Name - Carvalho Junior First Name - Edenilson Middle - dos Santos

Service (sector) Retina and Vitreous Nº CEP

Idiopathic Macular Holes Vitreoretinal Interface Analysis in Optical Coherence Tomography 2 and 3, Fundus Biomicroscopy and Intraoperative Aspect.

Edenilson S C Jr, Mirna Y, Tercio G, Daniela G, Fausto U. Purpose: To image the vitreoretinal interface in macular holes using Optical Coherence Tomography 2 and 3 (OCT-2 and OCT-3) and compare to the biomicroscopic and intraoperative findings. Methods: Six patients with idiopathic macular holes underwent complete ophthalmologic examination and optical coherence tomography scans using the OCT-2 and Stratus OCT-3. During fundus biomicroscopy, diagnosis was confirmed and graded by only one experienced vitreoretinal surgeon (Fausto U). Afterwards, two 5mm OCT scans were obtained in a cross orientation (one vertical scan and one horizontal scan) centered on the fovea or on the center of the macular hole. Another 9mm oblique oriented scan passing through the center of the fovea/macular hole and the center of the optic disc was performed. This protocol was repeated for OCT-2 and Stratus OCT-3. For those patients with surgical indication, a pars plana vitrectomy with internal limiting membrane peeling, intravitreous gas tamponade and face down positioning was performed. In eyes undergoing vitreoretinal surgery, close examination of the posterior vitreous cortex was performed, searching for the "fish strike" sign in order to establish vitreoretinal interface status. Results: Twelve eyes of 6 consecutive pateients underwent complete examination and OCT 2 and 3 scans. Fundus biomicroscopy and OCT-2 showed the same vitreoretinal interface status in 4 of 12 eyes. With fundus exam and OCT-3 this agreement level rises to 8 in 12 eyes, whereas between OCT-2 and OCT-3 this level reaches 5 in 12 eyes. Only one eye undewent pars plana virtrectomy and intraoperative findings confirmed OCT-2, OCT-3 and fundus biomicroscopy data. Conclusion: Statistical analysis cannot be performed due to the small sample. However, data may indicate that a very cautious fundus exam gives a more accurate and reliable information about vitreoretinal interface than does OCT-2. It also seems that OCT-3 does not show any advantage over a meticulous fundus biomicroscopy performed by an experieced vitreoretinal surgeon .