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### **PHAKIC RETINAL DETACHMENT. A PILOT PROSPECTIVE STUDY WITH B-SCAN ANALYSIS OF THE VITREORETINAL INTERFACE**

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Purpose: To compare the influence of parcial versus complete posterior vitreous detachment (PVD) on the surgical results of eyes with phakic rhegmatogenous retinal detachment (RRD) with flap tears that underwent pneumatic retinopexy (PR), scleral buckling (SB) or pars plana vitrectomy (PPV). Methods: Sixty eyes with phakic RRD were analysed pre-operatively (pre-op) with dynamic B-scan ultrasonography (B-scan) to determine the posterior vitreo-retinal interface status. The surgical techniques (PR, SB and PPV) were chosen by a vitreoretinal surgeon based on clinical examination with indirect ophthalmoscopy and fundus biomicroscopy but blinded for the B-scan results. After being followed for 12 months post-operative (post-op), the eyes were divided in 2 groups according to their pre-op PVD status: partial PVD and complete PVD. Final best-corrected visual acuity (final VA), primary surgical success rates, reoperation rates, and final anatomic success. Results: Of the 60 eyes, 50 (83,3%) completed 12 months follow-up. Eighteen eyes underwent PR (9 with partial and 9 with complete PVD), 15 had SB (8 with partial and 7 with complete PVD), and 17 had PPV (5 with partial and 12 with total PVD). Of the 22 eyes in the partial PVD group, 10 (45,5%) required one or more reoperations while only 3 (10,7%) of the 28 eyes required reoperation ( $p < 0,01$ ). The primary surgical success of PR was 33,3% (3 of 9 eyes) for eyes with partial PVD and 89,9% (8 of 9 eyes) for eyes with complete PVD ( $p = 0,02$ ); of SB was 50,0% (4 of 8 eyes) for eyes with partial PVD and 100% (8 of 8 eyes) for eyes with complete PVD ( $p = 0,05$ ); and of PPV was 100% (5 of 5 eyes) for eyes with partial PVD and 91,7% (11 of 12 eyes) for eyes with complete PVD ( $p = 0,70$ ). In the partial PVD group, 54,5% (12 of 22 eyes) achieved final VA of 20/40 or better while in the complete PVD group, 71,5% (20 of 28 eyes) achieved this level of visual acuity. The final anatomical success was 100% for both groups. Conclusion: For eyes undergoing PR and SB, the presence of complete PVD seems to be associated with a higher primary success rate when compared to eyes with partial PVD. For eyes undergoing PPV, PVD status didn't seem to interfere with primary surgical success.