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STRENGTH ADHESION OF CHORIORETINAL TISSUES AFTER THE INFLUENCE OF HIGH-FREQUENCY MICROSURGICAL ELECTRIC WELDING WITH SUPRACHOROID ACCESSES.

Poster

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Purpose:

To evaluate the strength adhesion of chorioretinal tissues, after the influence of high-frequency microsurgical electric welding, with suprachoroid accesses in order to accelarate the adhesion of tissues in retinal detachment.

Methods:

The study was performed on 52 rabbits (104 eyes), which were divided into 4 groups:10-12 Volt, 12-14(V),14-16 (V),and a control group.Fragment of the eye wall tissue containing the retinopexy was isolated into five separate groups:1 hour,3 days,1 week,2 weeks,and 1 month.The fragment was fixed to the weighing platform of an analytic electronic scale,so that the place of the welding of suprachoroid was in the center of the fragment.A nylon suture (10–0)passed through the retina was elevated by a biomechanical force elongation tester.The reduction in weight at the time of retinopexy rupture was registered as a measure for retinopexy adhesion strength.

Results:

After the use of local suprachoroidal high-frequency electric welding with a frequency of 66 kHz using three voltage modes, the strength of chorioretinal adhesion was significantly higher compared with chorioretinal adhesion on the intact retina (control group).In the early post-exposure period (up to 2 weeks), when using the 10-12 V, the strength of the chorioretinal junctions was higher compared to the other higher voltage parameters (12-14 V, 14-16 V) .A month after the suprachoroid electric welding was conducted, no significant difference was indicated between the groups.

Conclusions:

HFECW with suprachoroidal accesses allows immidiatly strong chorioretinal adhesion ,and could reduce the complications of vitreoretinal surgery.