

Using the PFCL-Air-Silicone Exchange System for the Surgical Treatment of Retinal Detachment

Author: Dmitriy Shkvorchenko

Advantages:

An improved technique for carrying out tamponading of the cavity at the end of surgical procedures is suggested. The silicone oil tamponade can be carried out in a so-called dry eye. This allows reduction in the percentage of retinal re-detachment in the postoperative period, particularly in cases with inferiorly located retinal breaks.

Methods:

The surgical system is switched to the operating mode of air pump. Simultaneously, the liquid PFC is removed in a passively with an extrusion needle. Thus, the residual subretinal fluid is moved towards the posterior pole and the peripheral retinal breaks and the drainage retinotomies are surely blocked up. The procedure is temporarily (5-10 minutes) stopped but air continues to come into the eye. During this time, the residual fluid is accumulated over and under the retina of the posterior pole. It allows to remove this fluid entirely. For subretinal fluid removal in paracentral parts of retina a punctiform retinotomy is carried out. An active subretinal drainage is used. After that additional laser coagulation can be done around zones of the breaks and the retinotomies. At the end of operation the syringe with silicone oil is attached to the infusion cannula and residual air is allowed to escape through the open sclerotomies.