INTRA-SILICONE OIL INJECTION OF METHOTREXATE IN POSTOPERATIVE PATIENTS OF RHEGMATOGENOUS RETINAL DETACHMENT: A CASE SERIES

Introduction:

The outcomes of surgery in complexes cases of rhegmatogenous retinal detachment (RRD) remains a challenge even for experient retinal surgeons. One of the main reasons is the proliferative vitreoretinopathy (PVR). Many treatments have been proposed and most recently intra-silicone oil injection of methotrexate has shown important results. The purpose of this study is to evaluate the incidence of PVR and retinal re-detachment after injections.

Methods:

Retrospective study, series of cases of 23 eyes from 23 patients undergoing PPV were filled with silicone oil secondary to RRD. Each patient received 12 consecutive weekly injections of methotrexate (dose: 400ug / 0.01mL). Inclusion criteria included patients with primary RRD, cases of retinal re-detachment in previously vitrectomized eyes and patients with elevated risk for PVR formation (prolonged detachment time, RRD post-trauma, giant rupture, low mobile retina).

Results:

A total of 23 eyes were included in the study, with a mean age of 53 (13 - 77) years. The mean best-corrected visual acuity (BCVA) at the end of 03 months was ≥ 20/150 in 17 of 23 eyes (73.9%). Visual acuity (VA) remained stable in 2 of 23 patients (8.6%) and improved in 19 of 23 patients (82.6%). All operated eyes remained with retina applied throughout the follow-up, except for one patient who was re-operated and at the end had surgical success. The only side effect observed was superficial punctate keratitis, present in all patients.

Discussion:

Methotrexate is an antagonist of folic acid and according to its anti-metabolic, anti-proliferative and anti-inflammatory action, it has been used intra-oil in patients in the postoperative period of PPV by retinal detachment with PVR. Its effectiveness has been proven to reduce the incidence of retinal re-detachment, as observed in our study. The dose, number and frequency of treatment vary according to each study. More accurate statistical analysis with a control group and a larger sample size is still necessary.

Key-words: methotrexate; proliferative vitreoretinopathy; rhegmatogenous retinal detachment.