SUMMARY

Proliferative vitreoretinopathy is the most common cause of ultimate failure after retinal reattachment. We briefly reviewed the different classifications of PVR, diagnosis of PVR, the pathology and pathogenesis of PVR, different preoperative, intraoperative risk factors and different drugs reported in literature used for pharmacological prevention of PVR.

Proliferative vitreoretinopathy remains difficult problem to solve despite advances in vitreoretinal surgical techniques. There is still a significant incidence of PVR in rhegmatogenous retinal detachment. Surgery for PVR now has a high primary anatomical success rate. However, recurrence due to ongoing process of proliferation and contraction could result in secondary PVR formation and recurrence.

Surgical influences on the risk of PVR comprise early primary vitrectomy, surgical skills (atraumatic surgery), retinectomy and use of adjunctive pharmacological agents.

The use of adjunctive treatments to prevent cellular proliferation holds promise for the prevention of PVR or recurrences after surgery. These include daunomycin, 5-fluoruracil, steroids and heparin as most commonly used agents. It seems unlikely that focusing therapy on one particular target will not be sufficient to stop the entire cascade of cellular events leading to PVR. Rather multiple adjunctive agents targeting at diffeent stages of the process are needed. Also varying concentrations and exposure periods given at the appropriate time might be more successful in improved outcomes.

In our study we evaluaed the adjunctive 5 – FU and LMWH intraoperatively on infusion fluid during vitrectomy procedure to prevent secondary PVR for cases at high risk.

We operated on 28 patients (14 adjuvant treatment group A and 14 control group B). We had a final attachment rate of 92.9% in group A and 78.6% in group B. Which is comparable to results reported in literature.

Adjuvant 5-FU and LMWH during vitrectomy proved to be safe and effective in cases with higher grades of PVR, hypotony, and traumatic PVR cases. Further studies on a larger scale of patients, using one variate for each study are needed.