

## **Risk of Retinal Detachment following vitrectomy due to Macular Hole or Epiretinal Membrane**

Anna Eriksson<sup>1</sup>, Eva Olofsson<sup>1,2</sup>

<sup>1</sup>Ögonkliniken Norrlands universitetssjukhus, Umeå

<sup>2</sup>Institutionen för klinisk vetenskap, oftalmiatrik, Umeå universitet

### **Introduction**

The aim of this study was to evaluate the risk of retinal detachment (RD) following vitrectomy due to macular hole (MH) or epiretinal membrane (ERM). Since surgical procedure slightly differ, the aim was also to compare the risk of RD between the two conditions.

### **Methods**

This is a retrospective study including all cases of RD within 6 months following vitrectomy for MH or ERM between January 2017 and June 2021. All surgeries were performed at Umeå University Hospital. The total number of vitrectomies performed due to macular hole or ERM during the same time period, was used to calculate the risk of RD following macular surgery. Ch2-test was used to compare the risk of RD following MH surgery to the risk of RD following ERM surgery. A p-value of 0.05 or less was considered significant.

### **Result**

The overall risk of RD, within 6 months following surgery for ERM or MH, was 1.8% (23 out of 1274). The risk of RD following macular hole surgery was 2.6% (14 out of 539) and following epiretinal membrane surgery 1.2% (9 out of 735). No difference in the risk of RD was found between the two groups ( $p=0.1$ ). Intraocular gas was used for macular hole closure in all cases, whereas only in 33% of ERM cases.

### **Discussion**

We conclude that the difference in surgical procedure between MH and ERM does not affect the risk of RD. Although we found a low risk of RD, the risk must always be considered when deciding on macular surgery.

**Key words:** Retinal detachment, vitrectomy, epiretinal membrane, macular hole.