

# Inadvertent delay to surgery for epiretinal membrane surgery due to the pandemic (COVID-19), establishing natural history and risks of delay

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## Purpose :

To evaluate the postoperative outcomes of epiretinal membrane managed during the coronavirus-19 pandemic at a tertiary referral centre. This is to ascertain if ERM of longer duration or surgical delay leads to worse visual and/or anatomical outcomes.

**Venue :** Department of Ophthalmology at the Newcastle Eye Centre (NEC) of Royal Victoria Infirmary, Newcastle, United Kingdom.

## Methods :

- Retrospective analysis of all ERM patients treated at the NEC from 2021-2022 was collected. Only cases with 12-month follow-up postoperative visual acuity (VA) were included.
- The clinical characteristics, operating surgeon and visual acuity post-surgery data were evaluated. The total symptom duration and ERM stage (according to Govetto *et al.*<sup>1</sup>) before the first clinic visits and up to surgery date for each patient was recorded. The main outcome measure was the VA improvement.
- **Good outcome:** postoperative VA improvement of >2-lines.
- **Excellent outcome:** postoperative VA improvement of >3-lines.
- **Poor outcome:** postoperative VA reduction of >2-lines
- All the statistical analysis was done using STATA 16 software.

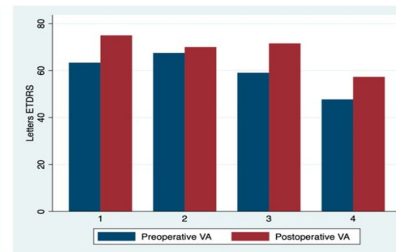
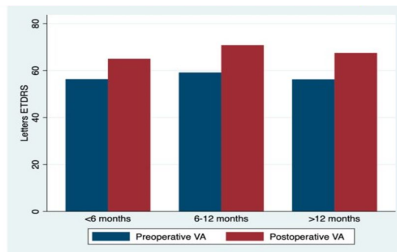
## Reference :

1 Govetto A, Lalane RA 3rd, Sarraf D, Figueroa MS, Hubschman JP. Insights Into Epiretinal Membranes: Presence of Ectopic Inner Foveal Layers and a New Optical Coherence Tomography Staging Scheme. *Am J Ophthalmol.* 2017 Mar;175:99-113.

## Results:

A research randomiser selected a total of 40 ERM cases with a 1:1 female/male ratio. Mean age was 72±3 years with a median duration of symptoms of 11 months (15 IQR) before surgery. Overall 50% of patients showed an improvement in VA, 25% had similar VA and 25% had a worse postoperative VA after surgery. There was a significant improvement of VA after surgery (p=0.03). A good outcome was obtained in 17 patients (42.5%) and 14 patients (36%) showed a gain of 3 lines or more. On the other hand, 6 patients (15%) had a poor outcome.

There was a significant change of ERM stage between first clinical visit and the day of surgery (p<0.001). However, ERM stage was not associated neither with a poor nor a good outcome (p=0.7). The only factor significantly associated with postoperative visual gain was preoperative VA (logMAR) (rho=0.7, p<0.001).



There was no statistically significant link between symptoms duration and poor or good outcomes (p=0.6 and p=0.8, respectively). Accordingly, no significant correlation between symptoms duration and postoperative VA change was noticed (p=0.3). However, VA was significantly worse in those patients with more advanced ERM stages (p=0.04).

## Conclusion :

Our results show that there is a significant progression of ERM stage over time. However, delay of ERM surgery during COVID-19 pandemic did not seem to affect final visual outcomes. Therefore, it could be safe to wait before indicating surgery in these patients if needed. **The only predictor of postoperative visual outcome in the present study was preoperative VA. Neither duration of symptoms nor ERM stage predicted final visual outcomes.** Further studies may be required to confirm our findings.