

## Sutureless 25g and 23g Vitrectomy Under Topical Anaesthesia

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### PURPOSE

To evaluate the safety and patients' tolerance to topical anaesthesia in vitreoretinal surgery.

### METHODS

38 (n=38) patients (group A) were operated with 25g (n=25) and 23g (n=13) vitrectomy under topical anaesthesia with 2% lidocaine gel, for various vitreoretinal diseases (macula holes, epimacular membranes, proliferative diabetic retinopathy and retinal detachment, etc.). Subjective patients' pain was recorded using a visual analogue scale and a numerical rating scale from 0 to 10. Results were compared with the subjective pain recorded from a control group of fifteen (15) patients (group B), who underwent similar procedures under peribulbar anaesthesia. Mann-Whitney U-test was used to compare the two samples. 15 months after the beginning of the study all patients' records were reviewed.

### RESULTS

Follow-up period ranged from one month to one year; two cases were reoperated. No anaesthesia-related complication was noted during surgery or during the follow-up period. The operation converted in 20g vitrectomy and subtennon anaesthesia in 2 out of 38 cases. One retinal touch occurred during the -en block epimacular membrane and internal limiting membrane peeling of the first patient with epiretinal membrane. Patients with peribulbar anaesthesia experienced more pain with a marginal statistical probability ( $p < 0.05$ ). Maximal pain level recorded was +4 (moderate) in group A and +8 (severe) in group B. The most painful steps of the procedures were scleral indentation and subconjunctival injection of antibiotics and steroids in the topical anaesthesia group and peribulbar injection and scleral indentation in the peribulbar anaesthesia group. According to the surgeons macula surgery performed under topical anaesthesia and with 25g instruments represents the most difficult combination.

### CONCLUSION

Topical anaesthesia with 2% unpreserved lidocaine gel may be a safe and well-tolerated alternative anaesthesia in a broad spectrum of vitreoretinal surgical cases. Sutureless 25G and 23G vitrectomy under topical anaesthesia.