

# Preliminary results of the comparison of 23G Ultravit™ and 27G Ultravit™ vitrectomy on patient comfort and ocular surface disease

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## ABSTRACT

**Introduction:** We aim to compare patient comfort and the impact on ocular surface disease between the 23G Ultravit and 27G Ultravit vitrectomy techniques. **Materials and Methods:** This was a preliminary retrospective study where all cases that underwent 23G and 27G vitrectomy surgery at HUKM between October 2021 and November 2023 were included. Main outcome measures were as follows: pain score, visual acuity (VA), intraocular pressure (IOP), tear break-up time (TBUT), tear meniscus height (TMH), and Ocular Surface Disease Index (OSDI) on one-week post-operative follow up. **Results:** 29 patients were included in the study where 20 cases went on 23G vitrectomy and nine cases went on 27G vitrectomy system for various diagnosis. One-week post-op pain score follow-up showed that three patients (0.15%) in 23G group and one patient (0.11%) in 27G group had a pain score 1/10 while the rest claimed to have no pain. Mean IOPs were 14.06mmHg (3.02) in the 23G group and 13.66mmHg (3.24) in the second group, with mean TBUT 8.62s (5.80) in 23G group and 11.61s (5.48) in the 27G group. Mean TMHs were noted to be 0.276µl (0.15) and 0.26µl (0.06) in the 23G and 27G groups consecutively, with OSDI mean scores were 12.77 (12.63) in 23G group and 22.56 (17.69) in 27G group. Statistical analysis showed no significant differences between two groups ( $p>0.05$ ) in terms of pain score, VA, IOP, TBUT, TMP and OSDI on 1-week post-operative follow-up. **Conclusion:** Both 23G and 27G vitrectomy procedures demonstrated comparable outcomes, suggesting that either gauge can be effectively utilised without compromising patient comfort or risk of ocular surface complications.

**Keywords:** Ultravit™, gauges, ocular surface disease, patient comfort, vitrectomy