

# **Comparison Of 20-Gauge Transconjunctival Sutureless Vitrectomy With Conventional Vitrectomy**

Thesis

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Ophthalmology

By

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## Abstract

### Comparison between 20-gauge Transconjunctival sutureless vitrectomy and Conventional Vitrectomy

**Purpose:** to compare the efficacy, benefits, complications and safety of a transconjunctival sutureless technique in comparison with pars plana vitrectomy using conventional 20-gauge instruments versus the conventional technique.

**Design:** prospective, randomized, comparative, interventional case series.

**Participants:** 60 eyes of sixty patients with variable indications of vitrectomy.

**Methods:** Patients were chosen from **December 2011 to January 2014**, and classified randomly into two groups, **Group A** were operated using 20-gauge Transconjunctival sutureless technique, **Group B** were operated conventionally. The preoperative evaluation included data on sex, age, indication for surgery, full ophthalmologic examination including keratometric readings, Intraocular pressure (IOP). Duration of surgery was recorded, postoperative, follow up of about 6 months including assessment at 1 day, 1 week, 1 month, 3 months, and 6 months postoperative. Ophthalmologic examination, keratometric readings, Intraocular pressure, visual acuity, a questionnaire was prepared for assessment of patient discomfort, and recording of complications were reported.

**Results:** The study presented significant difference regarding mean duration of surgery. In group A was ( $99.50 \pm 12.62$ ) while in group B was ( $111.33 \pm 6.42$ ), there was significant difference in surgically induced Astigmatism in the first day postoperative. In group A ( $1.25 \pm 0.73$ ) while in group B ( $1.77 \pm 0.72$ ), in the first week group A ( $1.04 \pm 0.43$ ) while in group B ( $1.26 \pm 0.38$ ), in the first month ( $0.56 \pm 0.21$ ) in group A and ( $0.69 \pm 0.25$ ) in group B there were no significant difference thereafter. Follow up of Intraocular pressure showed no statistical significance between preoperative and postoperative recordings in both groups and cases presented with hypotony or increased intraocular pressure were controlled within days. Comfort score showed significant difference between both groups through the first month postoperative.

**Conclusion:** The study shows that TSV surgery allowed a safe approach without serious complications for nearly all cases of different vitreoretinal pathology requiring pars plana vitrectomy, with the advantage of being faster and smaller gauge vitrectomy system with shorter postoperative recovery time and the eyes are more white and quiet postoperatively, as well as we can use the conventional 20 gauge instruments and disposables with low cost.

**Keywords:** Sutureless, transconjunctival, vitrectomy