COMBINED 20- GAUGE AND 23-GAUGE PARS PLANA VITRECTOMY
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Background: To evaluate the effectiveness and outcomes of combined 20 gauge and 23 gauge pars plana vitrectomy

Methods: This surgical procedure was performed in 79 eyes of 74 patients. The indications for surgery included epiretinal membrane, macular hole, endophthalmitis, proliferative diabetic retinopathy complications, rhegmatogenous retinal detachment, vitreomacular traction, dropped nucleus, malign glaucoma and perforating globe injury. One inferotemporal 23 gauge transconjunctival sclerotomy port for infusion and two superior 20 gauge sclerotomy ports for introducing the vitrectomy probe were created along with two 25 gauge Torpedo mini light illuminations to perform bimanual vitrectomy. Changes in best corrected visual acuity (BCVA), intraocular pressure, lens status, operative complications, and surgeon satisfaction were evaluated.

Results: The median follow up period after surgery was 3 months (range 1-6 months). The mean preoperative and postoperative BCVA (LogMAR) were 1.52±1.08 and 1.00±0.84, respectively (p<0.05). BCVA increased in 44 eyes (55.70 %), remained unchanged in 31 eyes (39.24 %) and decreased in 4 eyes (5.06 %). Cataract progression was observed 7 of 54 phakic eyes. Choroidal detachment was observed in one patient during complicated rhegmatogenous retinal detachment surgery. None of the eyes had postoperative hypotony or endophthalmitis.

Conclusion: Combined 20 gauge and 23 gauge vitrectomy has shorter operating time, decreased postoperative inflammation and better visual rehabilitation compared to standard 20 gauge vitrectomy. Bimanual surgery with two superior 20 gauge sclerotomies allows a more effective approach compared to 23 gauge transconjunctival sutureless vitrectomy in complicated cases.