Intraocular pressure, topical therapy and visual field in pregnancy
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Purpose: To evaluate the course of the intraocular pressure and visual field during pregnancy.

Methods: 13 eyes of 8 patients with glaucoma were followed up during pregnancy. Patients were examined every 3 months during pregnancy or more often as clinically indicated. Visual field tests were performed using TOP-G1 program of the Octopus perimeter during pregnancy and post partum. Data were analyzed for intraocular pressure (IOP), number of medications, and visual fields before, during and after pregnancy. Manova and two-tailed paired t-test were used to compare pre and post-partum IOP, glaucoma medications and visual field indexes.

Results: 13 eyes of 8 patients who were followed up during pregnancy and post partum were included in this study: five with congenital glaucoma, 1 post-keratoplasty glaucoma, 1 pigmentary glaucoma and 1 patient with ocular hypertension in both eyes. Three patients had very poor visual acuity (count fingers or less) in one eye and 3 other patients had a preexisting severe visual field loss (Mean Defect > 12 dB). In 12 (92.3%) of 13 eyes, there was no increase in IOP and no progression of disease was observed. The IOP during and after pregnancy remained stable. Before pregnancy the IOP were $17.3 \pm 3.6$ mmHg and the IOP values were $17.4 \pm 5.2$ (p = 0.930), $18.1 \pm 4.7$ (p = 0.519), $20.2 \pm 8.7$ (p = 0.344) and $21.5 \pm 7.6$ (p = 0.136) mmHg at first, second, third trimester and post partum respectively. There was no change in Mean Defect (p = 0.249) and Loss Variance (p = 0.463) before and after pregnancy. In one patient (7.7%), IOP increased during pregnancy (IOP 40 mmHg) and there was progression of visual field loss. Glaucoma medications were used by 6 of 8 patients before pregnancy. The number of medications needed to control IOP were $1.7 \pm 0.52$. There was a reduction in the number of medications at second and third trimester: $0.83 \pm 0.75$, (p = 0.04). The number of medications after pregnancy were $1.17 \pm 1.7$. The classes of medications used most frequently were beta-blockers, and topical carbonic anhydrase inhibitors. There were no adverse effects of medication use during pregnancy observed in the patients or their offspring.

Conclusions: In this case series there were no changes in IOP and visual field indexes in most of patients and many of them were maintained on fewer IOP-lowering medications compared with before pregnancy. In some patients, glaucomatous damage may be severe or the IOP too high and the risk of further visual field progression is high. Women must be monitored closely during pregnancy.