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Service (sector) GlaucomaN° CEP

## Effects of intraocular pressure change on topographic measurements performed with the Heidelberg Retina Tomograph II.

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**Purpose:** To evaluate the effect of intraocular pressure (IOP) change on topographic measurements performed with scanning laser tomography. **Methods:** 17 patients with open-angle glaucoma (median age, 62 years; range; 37 to 87 years) on bilateral topical medical therapy were enrolled. After baseline examinations were performed with the Heidelberg Retina Tomograph II (HRT II), the topical medications were discontinued in the patient's least damaged eye, or in a randomly selected eye in cases of symmetrical disease. The fellow eye was maintained on the usual topical medications and served as the control eye. Subjects were then seen after 1, 2 and 4 weeks (visits 2, 3 and 4 respectively), after which topical medication in the study eye was resumed, and again after 8 weeks (visit 5). At each study visit, patients had 3 consecutive mean image series recorded with the HRT II and IOP measured. The average result from these 3 images was used for analysis. **Results:** IOP increased significantly in the study eyes after discontinuation of therapy by an average of 5.2 mmHg (32% higher than baseline IOP;  $P < 0.001$ ) and then returned to baseline levels at visit 5. During the entire study period, IOP remained constant in the control eye. Despite the fluctuation in IOP, no significant changes were observed in rim area and mean cup depth in the study eyes. No correlation was found between change in IOP and change in topographic parameters (rim area and mean cup depth) in the study eyes (figure). **Conclusions:** In this group of patients, moderate IOP change was not accompanied with significant changes in topographic parameters.

