

Comparison of the Diaton Transpalpebral Tonometer Versus Goldmann Applanation

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Background

Diaton tonometry is a unique approach to measuring intraocular pressure (IOP) through the Eyelid. It is a non-contact (no contact with cornea), pen like, hand-held, portable tonometer. It requires no anesthesia or sterilization.



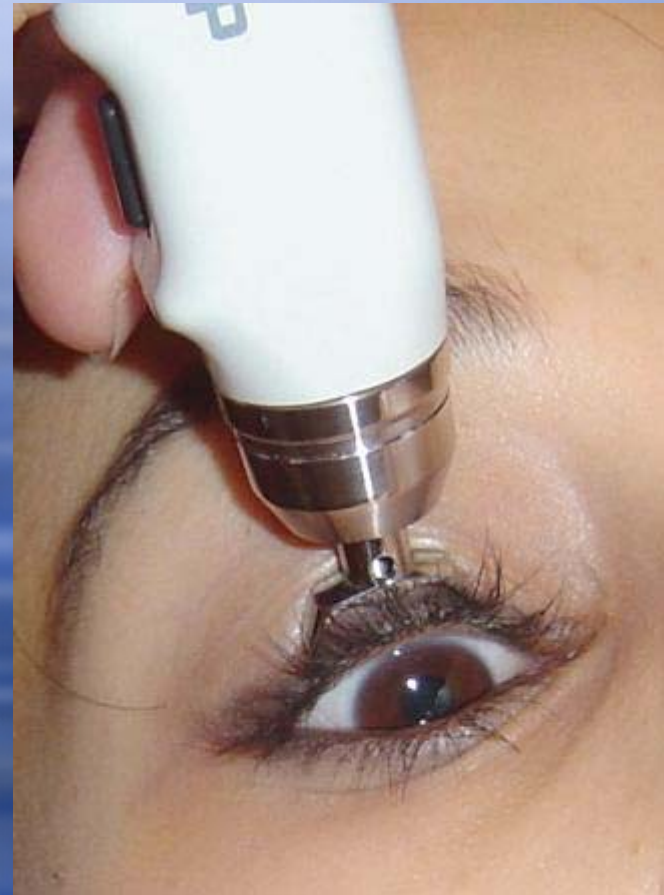
Purpose

To investigate the agreement in the measurement of intraocular pressure (IOP) obtained by transpalpebral tonometry using the Diaton tonometer versus Goldmann applanation in adult patients presenting for routine eye exams.



Methods

Retrospective chart review of consecutive IOP measurements performed on 64 eyes of 32 patients age 34-91 years with both the Diaton tonometer and Goldmann applanation. Results between groups were examined using analysis of variance (ANOVA) where appropriate.



Results

Mean IOP was 15.09 \pm 4.31 mm Hg in the Goldmann group and 15.70 \pm 4.33 mm Hg in the Diaton group ($p=0.43$).

Mean IOP variation between groups was 1.74 \pm 1.42 mm Hg (range 0-8). 83% of all measurements were within 2 mm Hg of each other.

Conclusions

The transpalpebral method of measuring IOP with the Diaton tonometer correlates well with Goldmann applanation. Diaton applanation may be a clinically useful device for measuring IOP in routine eye exams.