

Test report and a comparison of the pressure measurements of the digital portable tonometer DIATON for the measurement of the intraocular pressure through the eyelid

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The measurements have been conducted in Germany, in our private doctor's office by Mrs. Ina Conrad-Hegegerer MD. and Mr. Fritz Hengerer MD.

The results have been obtained with the following methods:

1. Applanation tonometry by Goldmann(Splitlamp Haag Streit 900)
2. Digital portable Tonometer Diaton
3. Non-Contact tonometry with Niedek Tonometer 1000

The purpose of the measurements is to evaluate the reliability of Diaton in the direct comparison with the already established processes.

There were 2 groups of test persons: Healthy subjects and glaucoma patients. Exclusion criteria were: Previous glaucoma patients, eyelid operations or inflammatory states of the front eye section. Furthermore, patients were excluded where a Goldmann tonometry could not be performed (Keratokonus, Epitheledema).

The static analysis contains:

- a) Mean
- b) Standard deviation
- c) Median error
- d) Correlation coefficient (Pearson)

Table 1. shows the measurements on healthy patients, Table 2. on those with glaucoma.

The results of the statistical analysis are summarized in Table 3. and 4.

Summary:

The analysis of the measurements confirms the validity of the measurements of the digital portable Tonometer Diaton