20 YEARS OF EXCELLENCE IN INTERNATIONAL MEETINGS
alliedacademies.com

2nd GLOBAL OPHTHALMOLOGY SUMMIT 2019

March 27-28, 2019 | Amsterdam, Netherlands

Margarita Rozhdestvenskaya, Ophthalmol Case Rep 2019, Volume 3

Margarita Rozhdestvenskaya

Tonom GmbH, Germany

BIOGRAPHY

Margarita Rozhdestvenskaya has an expertise in regulatory strategies, medical device registration standards, quality management system compliance and in-country regulatory representation. From 2013 she is a director of the Tonom GmbH that is the European Authorized representative for Diaton technology. Tonom GmbH fulfills the obligations of the Medical Device Directive MDD 93/42/EEC and acts as legal entity towards the European authorities as well as providing additional services regarding the technical information of the medical devices within the European community. Her expertise and proficiency as well as interest to science, innovation and a culture of operational excellence contribute to offer technology, services and support in order to improve the quality of people's lives.

Margarita_Roz@tonom.de

INDEPENDENCE OF THE *TRANSPALPEBRAL SCLERAL TONOMETRY* FROM THE THICKNESS OF THE EYELID

Increased intraocular pressure (IOP) is one of the important risk factors for glaucoma. An accurate IOP assessment is crucial for early detection, diagnostics and monitoring of glaucoma. Non-corneal IOP measurement with Diaton tonometer is performed through the eyelid. There are no a direct contact to the cornea or to the conjunctiva. Diaton tonometer is indicated for corneal diseases, postoperative conditions of the cornea, for a bedside diagnosis, etc. Here we examined a dependence of the transpalpebral scleral tonometry on the thickness of the eyelid in an unexplained sequence of patients during the consultation.

Methods: 43 patients, 15 males and 28 females (a total of 86 eyes) with age range from 16 to 80 years old: 51.0 (31.5-69.0) years [median (1st quartile - 3rd quartile)] was investigated. The eyelid thickness was measured using the Tomey ultrasound device DU-800. Measurements were performed sonically by immersion on each eye tarsus-parallel and perpendicular to the tarsus.

The mean of these two measurements was defined as eyelid thickness. The IOD measurement on each eye was performed by Diaton (Tonom. Ltd, Muenster). The data were analyzed with non- parametric statistics.

Results: The average of right eyes IOP was: 15.0 (12.0-17.0) mmHg, left eyes: 14.0 (12.0-16.0) mmHg, p = 0.605. The average of right eyelids thick-

ness was: 0.490 (0.462-0.510) mm and left eyelids: 0.489 (0.467-0.508) mm, p = 0.394. IOD values showed no significant correlation with the eyelids thickness on the right eyes: ρ = -0.051, p = 0.747; as well as on the left eyes: ρ = - 0.183, p = 0.240. In addition, no significant correlation of eyelids thickness with age was found: on right eyes: ρ = -0.069, p = 0.662; and on left eyes: ρ = 0.115, p = 0.463. When the group was divided into two subgroups with low (n = 20, 12.0 (12.0-12.6) mmHg and high (n = 23, 16.0 (15.5-19.0) mmHg IOP-values (cutoff: 15 mmHg), the average eyelids thicknesses of both subgroups hardly differed from each other: 0.494 (0.479-0.505) mm vs. 0.489 (0.469-0.503) mm, p = 0.470.

Conclusions: The results of the study demonstrate that in the range of normal IOP values at not pathologically changed eyelids the non-corneal transpalpebral scleral tonometry does not depend on the thickness of the eyelid. In addition, our data revealed no significant age-related alterations of eyelid thickness.