Reviewer’s report

Title: Goldmann and Error Correcting Tonometry Prisms Compared to Intracameral Pressure

Version: 0 Date: 27 May 2017

Reviewer: Carlo Nucci

Reviewer's report:

In this paper, McCafferty et al. compared the Goldmann applanation tonometer (GAT) prism and a newly designed prism (correcting applanation tonometry surface, CAT) to intracameral IOP, measured with a trasducer during cataract surgery. They observed that the IOP values recorded with the new CAT prism are more accurate than those measured with the Goldmann's prism in thin cornea and in cornea with lower resistant factor as assessed with ORAC. Cadaveric human globes were also used to determine the intra-operator and inter-operator repeatability of IOP measurements with both prisms, and no differences were detected between the two instruments. The paper is well written, the methods are described accurately and the results presented correctly. However the manuscript is not particularly innovative since most of the conclusions reached with the present experiments have been obtained with previous studies published in TVST 2016 and Clinical Ophthalmology 2017.

- Introduction line 89. Before presenting the aim of the present study the authors should present the results obtained in the previous two manuscripts on the accuracy of CAT compared to GAT and on the repeatability of the measurements. Than they should present how the present paper differentiates from them.

- Methods lines 95-107 this section should be presented in the introduction.

- Figure 1 is the same of figure 1 in Clinical Ophthalmology 2017 and figure 3 is the same of figure 6 in TVST 2016.

- Methods line 136, was refractive surgery an exclusion criteria?

- Page 10 line 196, GAT instead of CAT

- Methods. It is not clear if the human cadaveric eye testing were performed on 3 eyes or on 21, three for each IOP level tested.

- Pag. 12 lines 252-253 the example is not clear

- Pag 17 line 348 the sentence "all globes……post mortem" could be eliminated

- Pag 17 line 350 the sentence "Twenty ……two prisms" could be eliminated
Reference 9 is incomplete.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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