

Sample of English Rewriting

Field of research: Medicine

INTRODUCTION

~~Intraocular pressure (IOP) is one of the most important clinical indexes for glaucoma clinical practice because the difference of only 1 mmHg affects visual field progression.~~ Intraocular pressure (IOP) is one of the most important indices in the clinical management of glaucoma as visual field progression can be affected by slight differences of only 1mmHg¹. In both clinical and research settings, the standard method of measuring IOP employs Goldman applanation tonometry (GAT), with a significant amount of research evidence in this field based on IOP values obtained using GAT².

~~Now the standard method of measuring IOP is Goldman applanation tonometry (GAT).~~

~~Numerous significant evidences were indicated by using IOP value of GAT.²~~

While GAT is a safe and convenient procedure, it is prone to human errors due to reading bias³ and principle differences between theoretical and actual IOP values may result and real IOP because of GAT architecture is easily affected by variables such as corneal thickness and tear films⁴.

In contrast, dynamic contour tonometry (DCT; Swiss Microtechnology AG, Port, Switzerland) has the advantage over GAT in these areas in those weak points of GAT.

DCT utilizes a mechanical sensory system which reduces reading bias. In DCT measuring, mechanical sensing system reduces reading bias⁵ and has been reported to have high concordance with manometry IOP measurements. High accordance with manometry of intraocular pressure was reported.⁶

Furthermore, DCT is less affected by corneal variables such as central corneal thickness (CCT) the character that DCT was hard to be affect by central corneal thickness (CCT) was reported.⁷ a feature which is of particular importance since Japanese typically exhibit a thinner CCT than other ethnicities. That character was

Comment [BeK1]: CHECK: Please check that «reading bias» is a correct and appropriate term to use here.

Comment [BeK2]: CHECK: When you refer to «architecture», are you referring to the structural variations in the patient's eyes such as «corneal thickness», or is «architecture» a property of GAT?

important feature for Japanese.

Because Japanese CCT was thinner than other race's CCT.⁸

There have been numerous studies in the literature comparing GAT and DCT, with the majority of findings supporting DCT and its clinical implications in Japanese. Numerous articles about the comparison of GAT and DCT have been reported.^{9,10-12}

There are many positive results about the relation between DCT and CCT,^{9,10-12} that relation is clinically significant for Japanese, but some negative results have been reported. Some studies however,

found no difference between GAT and DCT and reported both techniques to be equally reliable.^{13,14}

And there is disagreement about over the relationship between DCT and corneal curvature remains, despite capabilities which have allowed it to overcome the limitations of GAT.^{15,16}

Therefore the consensus about the relationship between DCT and corneal properties has not been built yet, despite DCT has the potential to complement the limitation of GAT.

To our knowledge, no study comparing DCT and GAT techniques have been performed in Japan. Given the importance of IOP as a clinical index in the management of glaucoma, the high prevalence of glaucoma in the Japanese¹⁷, and their genetic predisposition to thinner corneas, the value of such a study was unquestionable.

Combining with great clinical significance of IOP measuring, high prevalence of glaucoma in Japan,¹⁷ and potential capacity of DCT complementing weakpoints of GAT, a research about DCT measuring for Japanese patients should be conducted.

But, there is no Japanese study of DCT to our best knowledge.

The aim of this study was to evaluate the reliability of IOP measurements obtained from GAT and DCT in a group of Japanese glaucoma patients by comparison of DCT, simultaneous measuring of GAT and DCT at the same day was performed for Japanese with primary open angle glaucoma (POAG) patients.

Comment [BeK3]: Rather than saying «negative result», consider explaining in brief what these studies found, for example «some studies found no difference between GAT and DCT and reported both techniques to be equally reliable in the diagnosis, monitoring, and management of glaucoma».