

Comparison between Immersion and Contact Biometry for Axial Length Measurement before Cataract Surgery

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ABSTRACT

Objective: To determine the accuracy of immersion method in measuring the axial length of the eye by comparing it with the contact method.

Study Design: Cross sectional study.

Subjects and Methods: This study was done in The Department of Ophthalmology, Pakistan Institute of Medical Sciences, Islamabad for six months from 11-12-2012 to 10-06-2013 on 180 patients. The patients with age related cataract were included. The ultrasound biometry was performed in all patients with the same apparatus, first by the contact technique and then after an interval of 10 minutes by the immersion technique. Mean of the axial lengths of all the patients measured by the immersion technique was compared with the mean axial length obtained by the contact method.

Results: A total number of one hundred and eighty patients were included in the study. There were 93 males and 87 females. The mean axial length by contact was found to be 23.36 ± 0.9 mm and by immersion method was 23.33 ± 0.9 mm. The difference between the two means was 0.03mm. The two methods of axial length measurement were found to be significantly correlated. (Pearson's correlation 0.995, $p < 0.001$)

Conclusion: There is no significant difference in the findings of contact and immersion techniques, with no clinically significant difference in the mean axial length measurements.

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