

An assessment of the interpupillary distance, the inner and outer intercanthal distances in the normal Indian population from early neonatal period upto over 70 years of age: a study of 3500 subjects.

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Abstract:

Background and aim: The normal range for anthropometric assessment of intercanthal, interpupillary and outer orbital dimensions is important and changes with age. This study was undertaken for setting a reference range for interpupillary distance, the inner and outer intercanthal distances in the normal Indian population, to observe the variation of these parameters with age, any differences in these parameters observed in male & female population and to find correlation with the refractive errors if any.

Materials and Methods: This study was conducted in 3500 subjects of both sexes from birth till over 70 years of age, which presented to us in the outpatient department of M & J institute of Ophthalmology and Dr. Thakorbhai V Patel Eye Institute in the period ranging from August 2008 to January 2010.

Results: A correlation with refractive errors has not been studied in previous literature. In our study, the range of IPDD in males was found to be 51.87-64.23mm & in females it was 51.16-62.23 mm, range of IPDN was 51.22 – 61.75 mm in males & 47.73-59.93 mm in females. The range of IICD was 18-36.09 mm in males & in females it was 19.38-34.89 mm. The range of OICD in males was 58- 92.8 mm & in females it was 56.63-88.56mm.

Conclusion: We present the data for the neonatal children to the older age groups from the same population group. The standards based on local data reflect the potentially different patterns of craniofacial growth resulting from racial, ethnic & sexual differences. These could be relied upon in diagnosis of craniofacial syndromes and orbito-facial trauma or for planning reconstructive surgeries for the same.

Keywords: interpupillary distance, intercanthal distance

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