In their article “Anthropometry of the Eyelid and Palpebral Fissure in an Indian Population,” Dr. Patil et al establish normal periorbital anthropometric values for a population that has not been studied to a great degree in the oculoplastic surgery literature. Their study included 216 male and female patients, 16 to 60 years old. Digital image analysis was prospectively performed to measure the following parameters:

- the distance between the medial canthus and the lateral canthus (palpebral fissure width),
- the distance between the open upper eyelid margin and the lower eyelid margin (vertical palpebral fissure distance),
- the intercanthal distance,
- the interpupillary distance, and
- the height of the open upper lid.

In choosing these measurements, the authors investigated parameters consistent with ranges published in current ophthalmic plastic surgery literature.1-4 The authors found that the mean intercanthal distance increased with age in both males and females, along with an increase in the palpebral fissure width and the vertical dimension of the upper lid. Upper eyelid height also increased with age among males and females. Interpupillary distance, however, decreased with age.

As the authors state, the study’s anthropometric eyelid parameters are more consistent with Western rather than Asian eyelid calculations. Nevertheless, the vertical height range in the Indian population is larger than that provided in the current oculoplastic surgery literature (8-10 mm).1-4 Furthermore, Indian males tend to have a larger vertical height compared to females, although the authors offer no explanation for the cause of these findings, which are distinct. Upper or lower lid retraction may account for the larger-than-expected vertical height observed in both sexes. For instance, was there a larger incidence of inferior scleral show in this group of patients? Specifically, did the females have a higher incidence of mild upper lid ptosis to account for the vertical difference between the sexes, and/or did the males have a higher incidence of lower lid retraction? The authors also found that the vertical distance increased with age but again offered no explanation. Was there a higher incidence of involutional lower lid retraction or ectropions present in the older-age group that attributed to the observed increase in vertical height? Both upper and lower lid positions can certainly affect vertical height.

Future studies could elaborate on the vertical height by evaluating the distance of the upper eyelid from the center of the pupil in primary gaze (referred to as MRD1) and the distance of the lower eyelid from the center of the pupil in primary gaze (referred to as MRD2). These values could be compared between age groups and sexes. Normal MRD1 is approximately 4.0 to 4.5 mm, which is a helpful parameter in evaluating for upper lid ptosis and other lid malpositions, such as upper lid retraction from thyroid eye disease.5 In contrast, MRD2 is helpful in quantifying the lower lid position relative to the pupil. Larger-than-expected MRD2 measurements can be seen in cases of lower lid retraction and inferior scleral show. Prior studies have relied on digital image analysis to accurately and objectively evaluate the lower lid position.6

The authors utilized digital image analysis to carefully evaluate the age-related changes in eyelid anthropometry among the Indian population. Their results indicate that such changes are more pronounced after the age of 45 years. The study found that intercanthal distance increased with age, as did the palpebral fissure width in this population (which is in contrast to that observed in prior anthropometric studies).7 Medial and lateral canthal tendon laxity occurs with age, especially after 60 years,8 which directly permits for an increased intercanthal distance.
Furthermore, tarsal plates have a general tendency to atrophy or shrink with age.9

One interesting question raised by this study relates to how the punctal position can change with age. The authors observed an increased intercanthal distance with age among males and females—probably a result of involutional medial canthal laxity. Would we also expect a lateralization of the puncta and possible punctal malpositions resulting in epiphora? Although the purpose of the study was to establish anthropometric eyelid parameters within an Indian population, future studies may utilize digital image analysis to evaluate change in punctal position and compare this to the incidence of epiphora with increasing age.

We commend the authors for their work in identifying baseline values for aesthetic parameters of the palpebral fissure and eyelid in an Indian population. Their findings help set the stage for future studies comparing values among age groups and sexes and investigating the causes of such differences.

**Disclosures**

The authors declared no conflicts of interest with respect to the authorship and publication of this article.

**REFERENCES**


