PURPOSE: To assess corneal parameters in constitutional thinness (CT) subjects and to compare them with those of healthy individuals.

METHODS: Twenty-four CT subjects (BMI < 18.5 kg/m²) and 24 healthy subjects (BMI: 18.5-25 kg/m²) were enrolled in this observational cross-sectional study. All participants were screened for age, gender, and medical history, then underwent a detailed ophthalmological examination. Corneal parameters were evaluated by Scheimpflug imaging. Height and weight of all subjects were measured and body mass index (BMI) was calculated.

RESULTS: The mean corneal thicknesses at the apex point, the center of pupil, the thinnest point, and the mean corneal volume were significantly lower in CT patients than those of controls. The mean intraocular pressure (IOP) was significantly lower in CTs than in controls. There was a significant correlation between BMI and IOP, and BMI was significantly correlated with all pachymetric measurements and corneal volume.

CONCLUSION: Corneal thicknesses were significantly thinner in CT subjects compared to those in control subjects. The impact of constitutional thinness on corneal parameters should be further investigated.