PURPOSE: To evaluate retinal nerve fiber layer (RNFL) thickness in migraine patients with unilateral headache.

METHODS: A total of 58 patients diagnosed with migraine headache consistently occurring on the same side and 58 age- and sex-matched healthy subjects were evaluated in this cross-sectional study. RNFL thickness was measured using spectral-domain optical coherence tomography, and the side with the headache was compared with the contralateral side as well as with the results of healthy subjects.

RESULTS: The mean patient age was 33.05 ± 8.83 years, and that of the healthy subjects was 31.44 ± 8.64 years (p = 0.32). The mean duration of disease was 10.29 ± 9.03 years. The average and nasal RNFL thicknesses were significantly thinner on the side of headache and on the contralateral side compared to control eyes (p < 0.05, for all). Thinning was higher on the side of the headache compared to the contralateral side; however, this difference was not statistically significant.

CONCLUSIONS: The RNFL thicknesses were thinner on the side of the headache compared to the contralateral side in the migraine patients with unilateral headache, but this difference was not statistically significant.