Aim: To determine correlation between the retinal nerve fibre layer thickness (RNFL) and central corneal thickness (CCT) in patients with ocular hypertension (OHT). Methodology: This was a prospective, observational study, done between January 2016 and June 2017 at a rural tertiary care eye centre. All patients diagnosed with OHT, defined as an intraocular pressure of 21 mm Hg or higher, with normal optic disc and visual field, in the absence of any other ocular disease, were included in the study. Patients with OHT were
sub-divided into thin (CCT ≤555µm) and thick (CCT >555µm) corneas. RNFL was measured with spectral domain optical coherence tomography and CCT with ultrasound pachymetry.

Results: We examined 65 eyes of 35 OHT patients with a male: female ratio of 3:4. The mean age was 45.4 ± 12.21 years. The mean age in males and females were 44.47 ± 10.93 years and 44.14 ± 13.15 years, respectively, and the difference was not significant (p-value=0.93). The mean intra-ocular pressure (IOP) was 23.48±2.47 mmHg (range: 21 to 30 mm Hg; 95% confidence interval [22.88, 24.08]). The mean CCT was 553.81±38.3µm and the mean RNFL was 102.12±12.28µm. Mean RNFL in thin corneas was 101.14±10.68µm and in thick corneas was 103.21±13.92µm. There was no significant difference in the average (p-value=0.502) or quadrant-wise (superior, nasal, inferior and temporal) RNFL, between the two groups (p=0.247, 0.882, 0.897, 0.551).

Conclusion: There is no correlation between central corneal thickness and retinal nerve fibre layer thickness in patients with ocular hypertension.