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## Effect of chronic alcohol and tobacco use on retinal nerve fiber layer thickness – A case control study

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**Objective:** To identify the effects of chronic alcohol and/or tobacco use on retinal nerve fiber layer (RNFL) thickness and to find the association between severity of addiction with RNFL thinning.

**Design:** Case control study at tertiary care centre in southern India.

**Methodology:** Cases included alcohol and/or tobacco users for at least 5 years. Severity of alcohol and tobacco dependence was graded by Alcohol Use Disorders Identification Test (AUDIT) and Fagerstorm Nicotine Dependence (FTND) scale respectively. Age and gender matched individuals without addictions were taken as controls. RNFL thickness was measured using Stratus Optical Coherence Tomography (OCT).

**Outcome Measures:** RNFL thinning by OCT.

**Statistical Analysis:** Differences in RNFL thickness between cases and controls were analyzed using Mann-Whitney test. Statistical significance was considered with  $p \leq 0.05$ . Effect of alcohol and tobacco consumption on RNFL thickness was analyzed using STATA 11 (Statacorp, Texas) and SPSS version 20.

**Results:** A total of 200 eyes of cases and controls respectively were included. Statistically significant RNFL thinning was noted in all quadrants except nasally. Significant RNFL thinning was seen with increased FTND Scale. RNFL thinning was seen with higher AUDIT scale, but this was not statistically significant.

**Conclusion:** People who are addicted to tobacco use are likely to have RNFL thinning. Authors recommend that OCT can be used as feasible preclinical tool to screen RNFL thinning among chronic tobacco and alcohol users.

### Biography

Praveen Kumar has completed his MBBS from Grant Medical College and Sir J.J. group of Hospitals, Mumbai and MS (Ophthalmology) from Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, India. He is senior resident at JIPMER, an institute of national importance, India. He has published various papers in reputed national and international journals.

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