

## **TOBACCO-ALCOHOL AMBLYOPIA: A DIAGNOSTIC DILEMMA**

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Introduction: Tobacco-alcohol-amblyopia is a rare condition characterized by visual impairment due to tobacco and alcohol abuse usually associated with nutritional deficiencies. The visual impairment generally presents as a centrocecal scotoma. Its pathophysiology is poorly understood but it is generally attributed to toxic effects of cyanide and B12 deficiency.

Case Description: 61 year-old-male presented with one-month history of altered-mental-status and progressive, painless, bilateral-vision-loss in the setting of severe alcohol and tobacco abuse and poor nutrition. Patient developed loss of central vision in left-eye and blurring of vision in right-eye after one week, which was reduced to only perception of hand movements by the time of presentation. His BMI was 19.3 with an emaciated appearance. On ophthalmological exam, visual-acuity was 20/200 (right) and 20/300 (left), with a left central scotoma and normal fundoscopic exam. Neurological examination was significant for confabulation and gait instability consistent with Wernickes-Korsakoff. Workup included negative imaging and normal B12/folate and thiamine levels, undetectable cyanide levels, negative LHON mutation. He was discharged after 30-days, after a steady reversal of his symptoms in the setting of abstinence and nutritional supplementation. A diagnosis of Tobacco-Alcohol-Amblyopia was made by exclusion and by history.

Discussion: This case of tobacco-alcohol-amblyopia has an atypical presentation because of normal fundoscopic exam, undetectable cyanide levels and normal B12 levels. It reinforces the need for biomarkers for this disease. Nutritional fortification has made these cases rare, but a Neurological perspective may be essential for accurate diagnosis, treatment and positive outcome for these patients.