Clozapine-induced maculopathy: a case report

Purpose: To report a second case of bilateral maculopathy associated with ocular and cutaneous pigmentation, secondary to clozapine toxicity. We present fundus photographs, OCT images and electrophysiological recordings demonstrating these changes. Our case highlights the risks of chronic clozapine therapy and associated retinal changes.
Method: Retrospective case report and literature review.
Results: A 57-year-old male, with a 22-year history of high-dose clozapine treatment for schizophrenia, presented to our eye clinic for a routine eye exam. His appearance was notable for generalised skin discolouration. His visual acuity was 6/5 OU. Bilateral corneal endothelial deposits and macular pigmentary changes were found. Macular OCT scans demonstrated right subfoveal atrophy, and left macular pigmentary disturbance. A left superotemporal field defect was evident on a 10-2 Humphrey visual field (HVF). Electrophysiological studies revealed progressive photoreceptor dysfunction in addition to loss of scotopic and photopic amplitude bilaterally. These findings were suggestive of clozapine-induced maculopathy. Clozapine may be absorbed via the uveal tract, and bind to melanin, causing damage to the retinal pigment epithelium. Alternatively, clozapine-induced disruption of the retinal dopaminergic system may also render the photoreceptors vulnerable to light damage.
Conclusion: Our patient experienced gradual visual decline evident on HVF and electrophysiology tests. Therefore, patients receiving chronic high-dose antipsychotic therapy warrant regular ophthalmological examination, and timely discussions with their psychiatrists are essential should abnormalities arise.