

3.17 Pattern electroretinogram in tuberculosis patients undergoing ethambutol treatment

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Purpose: To evaluate retinal ganglion cells using PERG in tuberculosis patients undergoing ethambutol therapy.

Methods: A case series of five patients newly diagnosed with tuberculosis were tested using pattern ERG before starting ethambutol treatment, two months after treatment, and one month after ethambutol treatment was stopped. Each patient underwent comprehensive ophthalmic examinations of both eyes, which included visual acuity, visual field examination, color perception and contrast sensitivity testing during ethambutol treatment.

Results: Reduction in N95 amplitude was found two months after ethambutol treatment, as opposed to normal findings of visual acuity, visual field examination, color perception, and contrast sensitivity testing. PERG showed an improvement in N95 amplitude one month after ethambutol treatment was stopped, but amplitude did not return to the normal pre-treatment value.

Conclusion: PERG findings include a reduction in N95 amplitude which suggests retinal ganglion cell damage. However, there was a minor improvement in N95 amplitude after ethambutol treatment was stopped which indicates a reversibility.