

Compressive and Glaucomatous Optic Neuropathy: A Comparative Study

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ABSTRACT

This research was aimed to study the etiology of optic atrophy and comparison of optic disc morphology between compressive and glaucomatous optic atrophy. It included 72 cases of optic atrophy admitted in Maharani Laxmi Bai Medical College, Jhansi between January 2016 to May 2017. Assessment of present complaints, examination of the eyes, visual acuity, refraction, perimetry, Optical Coherence Tomography(OCT) and slit lamp examination was done. The quantitative parameters of Optic Nerve Head (ONH) structure were compared using the Spectralis OCT with an enhanced depth imaging method. Out of 72 cases, 42 were males(58.33%) and 30 were females(41.67%). The disease was bilateral in 55 patients(76.39%). The disease manifested as primary optic atrophy in 36 patients(50%), secondary optic atrophy due to papilloedema in 9 cases(12.5%) and due to papillitis in 9 cases(12.5%). Six cases(8.33%) had consecutive optic atrophy and 12 cases(16.67%) had glaucomatous optic atrophy. The main causes were meningitis in 12 cases(16.67%), syphilis in 8 cases(11.1%) and intra-cranial space occupying lesions in 6 cases(8.33%). The mean and maximum cup depths of Compressive optic neuropathy(CON) were significantly smaller than those with Glaucomatous optic neuropathy(GON). The distance between Bruch's membrane opening and anterior surface of the lamina cribrosa (BMO-anterior LC) of CON was also significantly smaller than that of glaucoma. 72 cases of optic atrophy involving 127 eyes have been studied. Measurements of the cup depths and the LC depth showed ability to differentiate between CON with a glaucoma-like disc and glaucoma.