BILATERAL OPTIC DISC SWELLING WITH HEADACHE TURNS OUT TO BE A CASE OF OPTIC DISC DRUSEN

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ABSTRACT

Optic disc drusen, also known as hyaline bodies or colloidal bodies, are calcified nodules in the substance of optic nerve head caused by the products of axoplasmic transport in degenerated retinal ganglion cells. We report a case of 43 years old lady, who presented with headache and defective vision. Fundus examination revealed bilateral optic disc swelling. Later on, after investigations, it was revealed that optic disc swelling (pseudopapilledema) was due to deeply buried optic nerve head drusen and the headache was probably coincidental due to stresses and strains of life.

Key words *B-Scan ocular ultrasonography, Optic nerve head drusen, Pseudopapilledema.*

INTRODUCTION:

Pseudopapilledema is apparent disc swelling that simulates papilledema but is usually secondary to an underlying benign process. Optic disc in this condition is yellow and optic cup may be small or absent. No venous congestion is present. Spontaneous venous pulsations and the congenital anomalous vessels are seen. A common cause is buried or manifest disc drusen.

Disc drusen are composed of small conglomerates of mucopolysacchrides and proteinaceous material that become calcified with advancing age.[1] These small tumors develop within the substance of the nerve tissue (bilateral in 70% of cases) and can lead to an elevated disc and sometimes loss of vision. They may be inherited as an autosomal trait with irregular penetrance.[2] Most patients are asymptomatic. Peripheral visual field loss is seen in many patients although they remain symptom free. Loss of central vision is very rare.[3] Rarely, patients might experience permanent visual loss from secondary processes like retinal vein occlusion and choroidal neovascularization.[4,5] A case of optic disc drusen is presented to highlight its importance.

CASE REPORT:

A 43 years old, married lady presented in eye department with moderately severe headaches and and defective vision in the right eye for the last five months. She was a school teacher by profession. On examination no abnormality was detected. Ophthalmic examination showed right eye vision of 6/24 and left 6/6P, not improving with pin hole. Retinoscopy revealed hypermetropic astigmatism of +1.0Dsph / +1.0Dcyl 180° in both eyes. But it failed to improve her vision. Her eyes were aligned, extraocular movements were full. Pupils were round, equal and reacting to light. No relative afferent papillary defect was seen. Examination of fundi revealed bilateral optic disc swelling, right more than left, without physiological cups, without much congestion and having slight anomalous vascular branching pattern (Figure I). Peripheral visual fields showed gross constriction, extreme on the right side. CT scan was performed which did not show any space occupying lesion. Lumbar puncture was performed. Cerebrospinal fluid pressure was found to be 23cm H_2O and the laboratory report was also

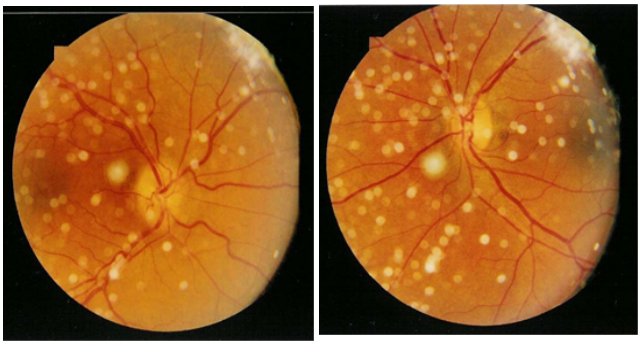

Fig I. Fundus Photograph of the patient showing swollen disc.

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normal. Fundus fluorescein angiography showed loss of disc cups, without leakage of the dye (Figure II). It did not show autofluorescence (Figure III). Ultrasound B-scan revealed small echogenic areas in the substance of right optic disc causing its bulging (pseudopapilledema). Similar lesion was also identified deeply buried in the left optic disc (Figure IV a,b,c). Diagnosis of bilateral optic disc drusen (ODD) was made. Patient reassured that it had no direct relation with her headache and advised annual medical and ophthalmic check ups.

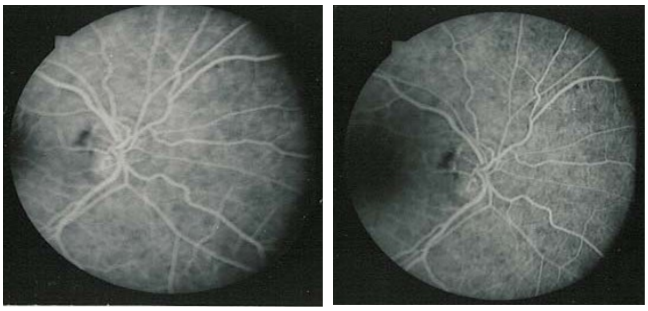


Fig II. FFA: Arterio-Venous Phase

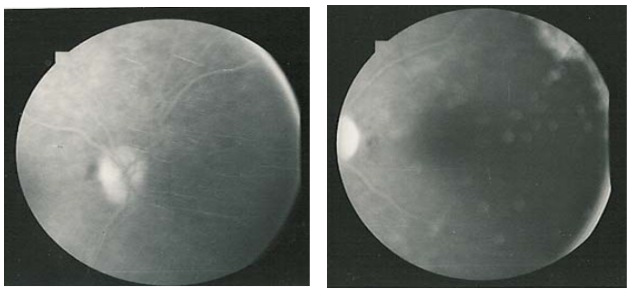
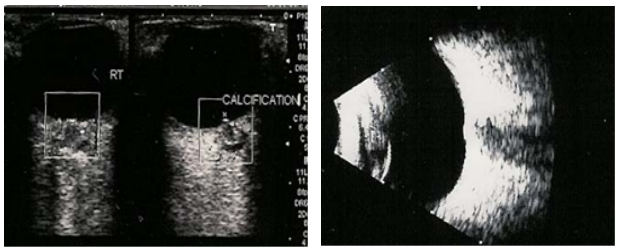
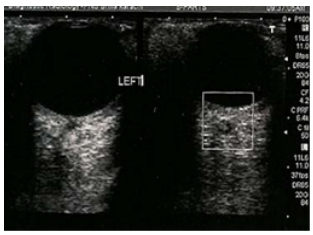


Fig III. FFA: Late Venous Phase



(a) Rt. Eye - Calcification

(b) Rt. Eye - Disc Swelling



(c) Left Eye - Calcification

Fig IV. (a,b,c): Ultrasound B Scan of Eye

DISCUSSION:

ODD is a congenital or developmental anomaly of the optic nerve head. Usually found incidentally but may lead to slowly progressive visual field loss. On clinical examination, lumpy appearance of optic disc, presence of spontaneous venous pulsation and anomalous vascular pattern help to make the diagnosis in the absence of any neurological manifestations.[6]

B scan ultrasonography is the most readily available and reliable method in identifying buried disc drusen because they are usually calcified and demonstrate high reflectivity.[7] Progressive visual field loss in patients with disc drusen merits a CT scan to rule out occult CNS lesions.[8] In recent years, emerging technique of optical coherence tomography has been found to be very helpful in differentiating optic disc edema due to papilledema and pseudopapilledema due to optic nerve head drusen.

The presentation in this patient was sufficiently threatening and opinion of neurosurgeon and the medical specialists would have obtained if ODD was not kept in differential diagnosis. B-scan ultrasonography of the eye is a noninvasive diagnostic technique and it should have been performed earlier in this patient. Headache was attributed to stress and pseudopapilledema was due to optic disc drusen, a coincidental finding. Visual field defects may be present in this condition, but our patient had it to the extent of complete blindness which was an extremely unusual situation.This case highlights the importance of diagnosing this benign cause of pseudopapilledema. This will prevent patients to unnecessary investigations and procedures.

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