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UNILATERAL OPTIC NERVE DRUSEN ASSOCIATED WITH RETINAL DETACHMENT - FINDINGS ON USG.

Radiodiagnosis

Dr. Rishabh Gupta Junior Resident, Department Of Radiodiagnosis, JNMC, Sawangi, Wardha, Datta Meghe Institute Of Medical Sciences (Deemed University)

Dr. Suresh Phatak* Professor, Department Of Radiodfiagnosis, JNMC, Sawangi, Wardha, Datta Meghe Institute Of Medical Sciences, Deemed University *Corresponding Author

KEYWORDS

We are presenting USG imaging findings in a case of optic nerve drusen associated with retinal detachment. This patient presented with headache and consistent blurring of vision in left eye, even after refractive correction.

Optic nerve head drusen occurs in 0.3% of the population and is frequently bilateral and familial, inherited as an irregular dominant trait. When drusen lie on the surface of the optic disk, the condition is easily diagnosed with fundoscopy- when classic yellow-white glistening hyaline deposits are identifiable .The drusen deposits also exhibit the property of auto fluorescence. When drusen lie deep within the tissue of the optic nerve, however, the typical fundoscopic appearance may not be evident .In this situation the swollen appearance of the optic nerve may be suggestive of papilloedema. Optic disk drusen can be diagnosed sonographically even when they are not evident on fundoscopy. **(1)**. They can be particularly difficult to distinguish from true optic nerve swellings as optic nerve head drusen are typically buried beneath the substance of optic nerve. Superficial drusen are usually diagnosed easily on fundus examination.Deep burried drusen requires additional imaging methods such as B SCAN USG and CT .The Mechanism of drusen formation is believed to be congenitally small discs and sclera channels that cause flow stasis and ganglion cell axon death. Drusen continues to grow and move towards disc surface due to ongoing neural tissue loss with progression of age, visual field defects increase. Often optic nerve head drusen is detected in second decade of life. Optic disk drusen can be diagnosed on the basis of their typical sonographic appearance even in the absence of typical fundoscopic findings. Optic disk drusen may be seen incidentally when sonograms are made for other conditions, and the finding should not be confused with more serious lesions of the optic nerve**. (2)** Optic nerve head drusen presents as bright hyperdense spot on CT. B-scan is non-invasive, inexpensive technique which shows characteristic feature of optic nerve head drusen in all cases successfully and hence it is investigation of choice in optic nerve head drusen. On B scan USG, highly reflective (hyperechoic) rounded structure is noted on optic nerve head on optic disc .Major advantage of USG is the ability to show even the posterior border of buried drusen. Management for this condition in most cases consists of routine ophthalmologic monitoring. There is no definitive treatment for this entity**. (3)** Retinal detachment (RD) is usually due to a break or tear in the retina; it may also be caused by vitreoretinal traction due to contracting membranes or because of subretinal exudates. On B scan USG, The detached retina is usually attached to the firm anchoring points of the oraserrata anteriorly and the optic nerve head posteriorly and, consequently, a total RD shows a funnel shape. Dynamic scan may reveal an undulating motion of the retinal membrane, particularly in a recent RD **(4)**

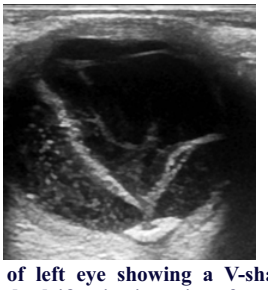

Figure 1: B-Scan of left eye showing a V-shaped membrane attached to fovea and calcification in region of optic nerve head.

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