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BILATERAL CHOROIDAL OSTEOMA

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Abstract : Choroidal osteoma is a benign ossifying tumor characterized by mature bone replacing choroid. The condition is reported rarely and hence poses diagnostic difficulties. We report a case of a 25 year old lady who presented with complaint of defective vision in both eyes and was referred as a case of chorioretinal scar. A 25 yr old young lady presented to us with complaints of seeing dark shadows in front of eyes for the past 7 years. Her best corrected visual acuity in right eye was 636 and left eye was 660.Slit lamp evaluation revealed a normal anterior segment. Fundus examination showed peripapillary lesion that is yellow-white to orange-red in color. Thin, atrophic, yellow-gray regions with associated RPE atrophy were seen. Ultrasound B scan demonstrated calcification in the posterior pole. Optical Coherence Tomography (OCT) revealed loss of foveal thickness with sub and parafoveal hypereflective RPE suggestive of scar and calcification .The patient was investigated to rule out metabolic disorders.

Keyword :ossifying tumour, choroidal osteoma, idiopathic, bilateral,

A 25-year old lady was referred to us with complaint of seeing dark shadows in the field of vision for 7 years. Her best corrected visual acuity in right eye was 6/36 and left eye was 6/60.Slit lamp evaluation revealed a normal anterior segment. Fundus examination showed bilateral peripapillary lesion that is yellow-white to orange-red in colour surrounded by a thin, atrophic, yellowgray regions suggestive of RPE atrophy Intra ocular pressure in both eyes were normal. Central fields in both eyes showed central scotoma. Ultrasound scan revealed a slightly elevated solid mass of single spike with extremely high reflectivity, with after shadowing of the tissue behind the lesion s/o calcification in the posterior pole. OCT revealed loss of foveal thickness with sub and parafoveal hypereflectivy suggestive of scar and calcification. FFA revealed blocked choroidal fluorescence corresponding to calcification and staining in areas of subretinal fibrosis. Further investigations were done to rule out metastatic calcification. Ultrasound abdomen, renal function test and serum calcium, phosphorus and magnesium were all within normal limits. We made a provisional diagnosis of bilateral choroidal osteoma with regressed choroidal neovascularisation.

FIGURE 1: Fundus photograph showing choroidal calcification with scarred CNVM

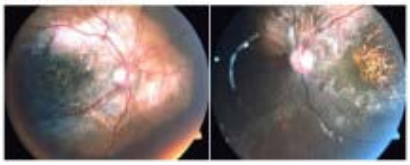


FIGURE 2:USG SHOWING SLIGHTLY ELEVATED SOLID MASS WITH SINGLE SPIKE OF HIGH REFLECTIVITY

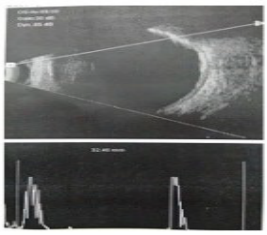
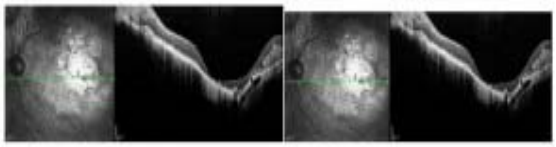


FIGURE 3: OCT OF BOTH EYES SHOWING HYPERREFLECTIVE SPACES



DISCUSSION:

Choroidal osteoma is a rare idiopathic benign ossifying tumor first described by Gass and Williams in 1978 There is no racial predilection, yet most reported patients were Caucasians..It is usually present from birth and typically has a low development potential. Most acepted theory regarding its origin suggests osseous metaplasia of retinal pigment epithelium .Some aurthors

believe that it represents a kind of choristoma. Factors implicated in its development however include inflammation, trauma, hormonal state, calcium metabolism, environment and heredity. It presents unilaterally in most cases, has a predilection for the female gender, and favours a juxta papillary location, becoming clinically manifest when it involves the macula. It is usually diagnosed during the second and third decades of life. The incidence of choroidal osteoma is extremely rare. Patients are usually asymptomatic. Choroidal osteomas can present as metamorphopsia, blurred vision and visual field defect. Ophthalmoscopy shows a circumscribed, irregularly ovoid or round mass with defined borders. The colour is related to the degree of thinning and depigmentation of the overlying retinal pigment epithelium, varying from a diffuse reddish orange, thus resembling choroidal haemangioma, to a yellowish white coloration which gradually shades peripherally into pinkish yellow, becoming indistinguishable from the surrounding healthy area. Ultrasonographically osteoma presents as a solid mass of single spike with extremely high reflectivity ,with marked acoustic shadowing of the tissue behind the lesion. A diffuse mottled pattern of hyperuorescence staining in the area of the tumor, occurs during the late stage of angiography. In addition, the tumor will be barely visible on routine orbital X-ray lms and computerized tomograms. Pathology shows dense bony trabeculae with intertrabecular marrow and narrowed choriocapillaries. RPE is focally depigmented with clumps of pigment granules along Bruch's membrane. The most important complication of the tumour include subretinal neovascularisation, subretinal and intraretinal haemorrhage and serous and haemorrhagic retinal detachment. Asymptomatic lesions may be observed. Tumors show growth in 41% to 51% of patients at 10 years.Mean growth is approximated to be at the rate of 0.37 mm/ yr. The factor found to be predictive of the tumor growth is absent overlying PRE alterations. Additionally, no tumor showed growth in the region of decalcification. CNVM occurs in 31% to 47% of patients at 10 years. Factors predictive of CNVM are irregular tumor surface and subretinal hemorrhage. Intravitreal therapy with anti-VEGF medications has been employed for active CNVM. Decalcification has also emerged recently as a new factor predictive of poor visual acuity. Decalcification occurs in 46% of patients at 10 years. It is associated with irregular tumour surface. When decalcification occurs in the area of the macula, it is associated with poor visual acuity that is possibly due to photoreceptor atrophy. However, a decalcified border of a tumour shows no growth on the margin results in the stabilization of the tumour.

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