ECRONICON OPEN ACCESS

EC OPHTHALMOLOGY
Case Report

# Incidental Choroidal Osteoma Diagnose in 11-Year-Old Child after Eye Trauma

**Gülderen Karaca*, Mustafa Demir, Umur Kayhan and Mustafa Nuri Elçioğlu**

*Department of Ophthalmology, Okmeydani Training and Research Hospital, Turkey*

***Corresponding Author:** Gülderen Karaca, Department of Ophthalmology, Okmeydani Training and Research Hospital, Turkey.

**Received:** May 25, 2019; **Published:** June 26, 2019

## Abstract

Choroidal osteomas (CO) are rare benign ossifying tumors that appear at posterior pole of the eye and affects the juxtapapillary and macular areas [1]. Usually diagnosed in young females but few cases have been reported among males and children.We report a case of choroidal osteoma in 11 year old child diagnosed incidentally following fundus examination after trauma to the right eye.

***Keywords:*** *Choroidal Osteoma; Ossfying Tumor; Choroidal Tumor*

## Introduction

Choroidal Osteoma is a rare bening ossifying tumor characterized bymature bone tissue involving the choroid. It was first described by Gass., *et al*. in 1978 [2]. It is mostly unilateral, diagnosed in young females in their second or third decade of life. The diagnosis of choroidal osteoma is based on its very characteristic clinical features, ultrasonography, and fundus fluorescein angiography findings. Orange-yellowish colored subretinal lesion at posterior pole, affects the juxtapapillary and macular areas [3]. Also well-defined geographic borders and depigmentation of the overlying pigment epithelium are its usual findings. B-scan ultrasonography shows a slightly elevated choroidal mass with high reflectivity and acoustic shadowing giving a pseudooptic disc appearance [3,4]. Fundus fluorescein angiography typically shows that an early hyperfluorescent Picture followed by late and persisting diffuse hyperfluorescence [4,5]. CT-scan reveals a plaque-likecalsification in the posterior wall. It's etiology and pathophysiology stil remain unclear. Tumor growth, overlying alterations of the retinal pigment epithelium (RPE), subretinal fluid, decalcification and choroidal neovascularization are included in natural course of choroidal osteomas [6]. The most vision threatening complication of CO is choroidal neovascularization and it may be related to tumor decalcification [6].

## Case Report

A 11- year- old boy presented with the trauma to the right eye.In the examination uncorrected visual acuity was 1.0 for the both eyes by Snellen. Anterior segment findings to the right eye were subconjunctival hemorrhage in temporal conjunctiva, edema in upper and lower eyelids while the left eye was normal. Fundus examination of the right eye revealed a large subretinal orange-yellowish lesion in the maculer legion (Figure 1). The lesion had well-defined margins and measured approximately three disc diameter in horizontal extent involving the fovea. Fundoscopy was normal in the left eye. B-scan ultrasonography of the right eye demonstrated a choroidal mass with high reflectivity which was suggestive of choroidal osteoma (Figure 2). On fundus fluorescein angiography, the lesion showed early patchy hyperfluorescence with late diffuse staining (Figure 3). CT- scan of the patient showed a peripapillary plaque-like calsification of posterior choroidal wall (Figure 4). Optical coherence tomography (OCT) revealed the retinal pigment epitelium irregularity and increased thickness in the choroid underlying the epitelium (Figure 5). The patient diagnosed incidentally following fundus examination after trauma to the right eye and did not give any past history of ocular symptoms or reduced vision.The patient was asked to come for regular follow up for observation and treatment of possible conditions associated with choroidal osteoma like subretinal fluid, hemorrhages, serous retinal detachment and choroidal neovascularization [1].

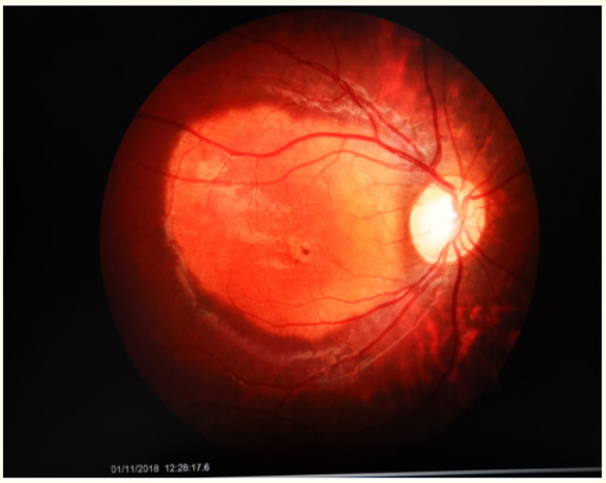


***Figure 1:*** *Fundus Picture showing a typical orange-yellowish lesion.*

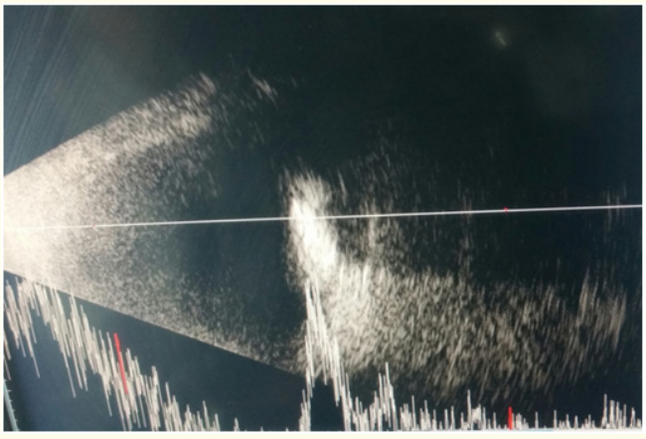

***Figure 2:*** *B-scan ultrasonography shows slightly elevated choroidal mass with high reflectivity and acoustic shadowing.*

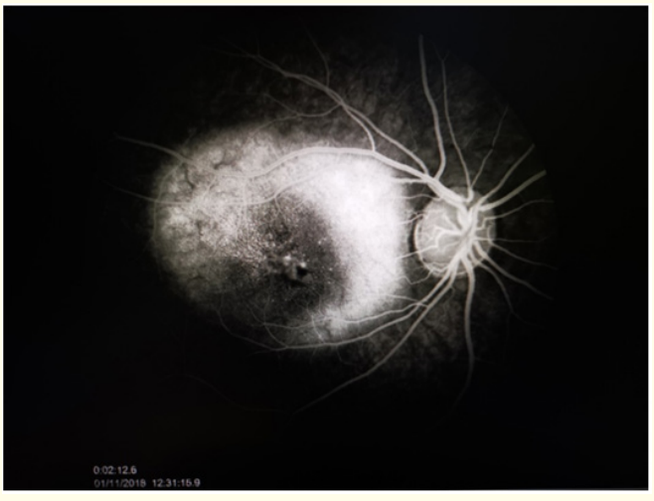


***Figure 3:*** *Fundus fluorescein angiography shows patchy hyperfluorescence (starting with early phase and staining in the late phase).*

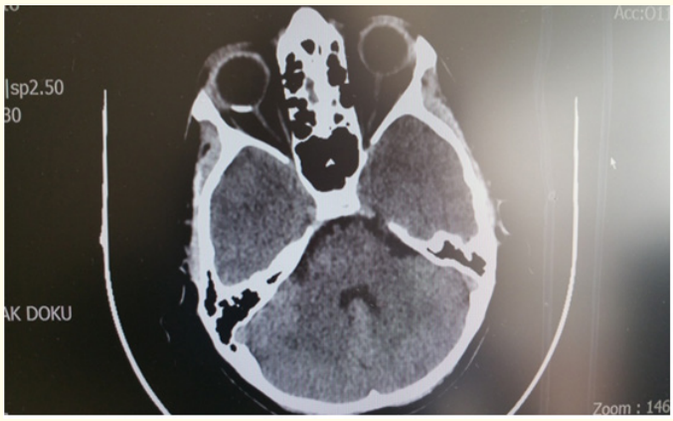


***Figure 4:*** *CT-scan shows plaque-likecalsification at the posterior wall of the eye.*

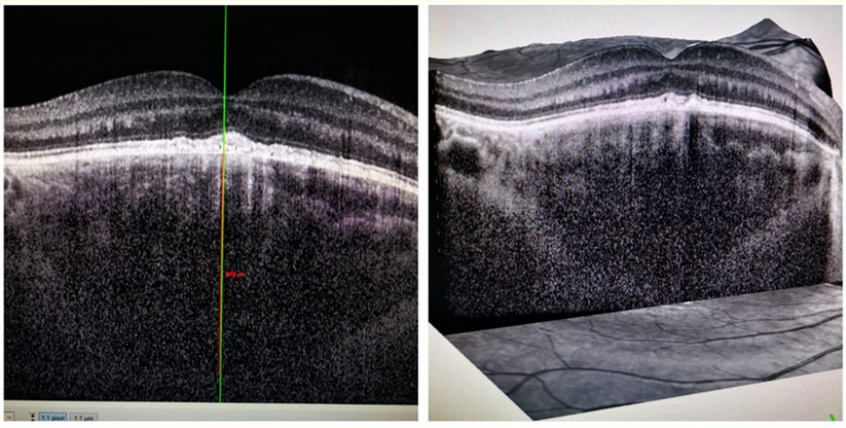

***Figure 5:*** *Optical Coherence Tomography shows that retinal pigment epitelium irregularity and increased thickness in the choroid underlying the epitelium.*

## Discussion

Choroidal osteoma is a benign ossifying tumor characterized by mature bone replacing choroid. It is often unilateral condition that affects the juxtapapillary and macular areas of young females but few cases have been reported among males and children.

The exact etiology of choroidal osteoma is stil unknown. There are theories about its origin like osseous choristoma, inflammatory diseases, congenital and endocrinal conditions. But it was not found to be associated with any systemic or ocular condition [8].

Differential diagnosis include amelanotic choroidal melanoma, amelanotic choroidal nevus, metastatic carcinoma to the choroid, circumscribed choroida lhemangioma, disciform macular degeneration, posterior scleritis, idiopathic sclerochoroidal calcification, and choroidal cartilage [1,8].

There is no specific and effective treatment for choroidal osteomas but therapies are focused on for complications arising from choroidal neovascularization (CNV) and subretinal fluid [1].

The most important complications of the tumor are subretinal and intraretinal hemorrhages, serous and hemorrhagic retinal detachments, choroidal neovascularization. The most vision threatening complication of CO is choroidal neovascularization and it may be related to tumor decalcification [6]. Hence patients with choroidal osteomas should be followed very carefully and closely to diagnose and treat these complications early.

Choroidal osteomas (CO) are rare benign ossifying tumors. There is no specific and effective treatment for choroidal osteomas. But the important complications of the choroidal osteomas should be followed very carefully and closely to diagnose and treat these complications early.

## Bibliography

1. Alameddine RM., *et al*. "Review of choroidal osteomas". *Middle East African Journal of Ophthalmology* 21.3 (2014): 244-250.
2. Gass JDM., *et al*. "Choroidal Osteoma". *Archives of Ophthalmology* 96.3 (1978): 428-435.
3. Empeslidis T., *et al*. "Diagnosis and Monitoring of Choroidal Osteoma through Multimodal Imaging". *Case Reports in Medicine* (2014): 393804.
4. Bloom PA., *et al*. "Appearances of choroidal osteomas with diagnostic imaging". *British Journal of Radiology* 65.778 (1992): 845-848.
5. Samuelsson D., *et al*. "Clinical, optical coherence tomography, and fundus autofluorescence findings in patients with intraocular tumors". *Clinical Ophthalmology (Auckland, N.Z.)* 10 (2016): 1953-1964.
6. Shields CL., *et al*. "Factors predictive of tumor growth, tumor decalcification, choroidal neovascularization, and visual outcome in 74 eyes with choroidal osteoma". *Archives of Ophthalmology* 123.12 (2005): 1658-1666.
7. Behera M and Das MK. "A case of choroidal osteoma in a 10-year-old child". *International Medical Case Reports Journal* 8 (2015): 273-275.
8. Paul A., *et al*. "Choroidal osteoma: An atypical case". *Kerala Journal of Ophthalmology* 28.2 (2016): 145-147.

**Volume 10 Issue 7 July 2019**