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Case reports

Ocular cysticercosis with intermittent blindness

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ABSTRACT. We report this peculiar case of ocular cysticercosis with intermittent blindness which is never reported to our knowledge. This case highlights use of Ultrasound for examination of the posterior segment of eye globe. In limited facilities Ultrasound is the main modality to reach the diagnosis. We also wish to enforce the point that in endemic regions and in young population primary cysticercosis and its complications must be kept in differentials of cystic mass or calcified mass, as in this case, we have seen both the stages of cysticercosis progression.

Key words: ocular, cysticercosis, CT, USG

Introduction

Cysticercosis in human is caused by cysticercus cellulosae, the larval form of *Taenia solium* [1]. It is the most common parasitic cause of the central nervous system with co-infection of the eye and subcutaneous tissue and skeletal tissue. Ocular infection occurs in up to 45% of patients with the most common site being the ocular adnexa in India [2]. CT and MRI are invaluable investigations in diagnosing ocular cysticercosis. Albendazole in combination with steroids is the drug of choice for extra-ocular as well as retro-orbital cysticercosis with remarkable improvement [3]. We report this very unusual case to point out the importance of USG findings in ocular cysticercosis presenting with intermittent blindness.

Case report

A 17-year-old male patient presented with sudden decrease in vision in left eye since 2 weeks, which was painless and gradually progressed to only perception of light in 2 weeks. He had history of intermittent blindness since quite some time. Otherwise patient was asymptomatic. There was no similar history before or in the family. On fundoscopic examination impression was hyperemia at disc with probable retinal detachment. High frequency ultrasound (B scan) was done, which showed a slightly increased axial length of left eye. There was a well-defined oval hypoechoic lesion at intra retina location. There was an internal hyperechoic focus within this lesion. There was separation of retinal layers with fluid between layers of retina. In endemic countries like India a young patient with above mentioned typical imaging features the most likely diagnosis is cysticercosis. Patient refused for surgical management, so conservative approach was adopted. A trial of Albendazole in addition to steroids was given but didn't seem to help the patient. However, patient deteriorated and had complete loss of vision. After one year patient complained of pain in the left eye. This time on fundoscopy media was completely hazy. On Ultrasound there was a hyperechoic, well defined oval structure at retinal surface which show posterior acoustic shadowing indicative of calculus. There was intense inflammation with chorioretinal detachment. These findings were in favor of pan-ophthalmitis. Patient underwent enucleation of left eye for that and is doing well presently. Patient consent was taken.

Discussion

Very rarely does cysticercus larva may present without its characteristic cystic form [4]. Wender et

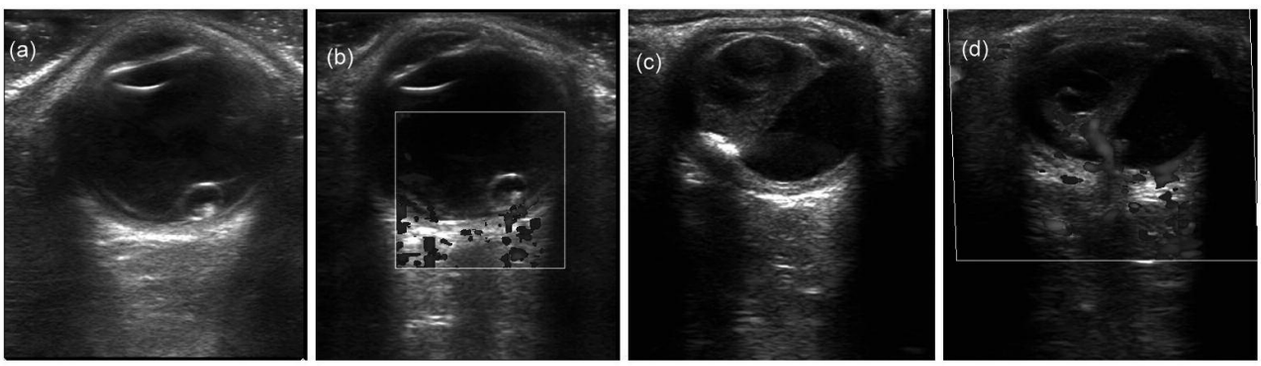

Figure 1(a): Ultrasound (B scan) of left eye showing a well-defined hypoechoic oval structure with a hyperechoic focus within, at intra-retinal location. This represent cysticercus cyst with scolex within. There is separation of retinal layers with fluid accumulation in between the layers of retina.
Figure 1(b): Ultrasound (B scan) of left eye show normal vascularity around the cyst.
Figure 1(c): Ultrasound (B scan) of left eye after 1 year showing a well-defined hyperechoic structure at retina with posterior acoustic shadowing suggestive of calculus. There is chorioretinal detachment with thickening of all three coats of eye ball.
Figure 1(d): Follow up ultrasound (B scan) of left eye showing chorioretinal detachment and increased vascularity of layers of eye ball indicative of endophthalmitis.

al. [5] have reported 8 patients with ruptured cyst in the eye, four of them located in the subretinal space. B-scan ultrasound is very helpful in diagnosis, because the properties of choroidal detachment secondary to cysticercosis and the echo properties of cysticercal cysts in general seal the diagnosis [6]. In cases where the medium is cloudy, as in intravitreal disease, B-scan ultrasound could be very helpful in establishing the diagnosis [7]. Spontaneous choroidal detachment in cases of trauma, central serous choroidopathy, pigment epithelial detachment, posterior scleritis, uveal effusion syndrome, and hypotonic choroidal effusion following glaucoma surgery can be differentiated form ocular cysticercosis in regards of USG findings [8].

Main treatment for retinal and sub-retinal cysticercosis is surgery [9]. Cysts deep within the orbit difficult to treat with surgery can be treated with a 4-week regimen of oral Albendazole 15 mg/kg/day in conjunction with oral steroids 1.5 mg/kg/day in a tapering dose over a one-month period. Steroids are prescribed because the treatment can increase the inflammation in some cases [10].

Conclusions

This case highlights use of Ultrasound for examination of the posterior segment of eye globe. In limited facilities Ultrasound is the main modality to reach the diagnosis. We also wish to enforce the point that in endemic regions and in young population primary cysticercosis and its complications must be kept in differential of cystic mass or calcified mass, as in this case, we have seen both the stages of cysticercosis progression.

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