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Research Article - Human Anatomy Case Report

Ammon congenital protrusion – case report

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Abstract

The authors present a rare ocular malformation, accidentally discovered in a male of 54 year.

Key words

Sclera, ectasia, ultrasound, visual field, fundus oculi, retina.

Introduction

Ammon congenital protrusion is a very rare finding in ophthalmology practice. We decided to report this issue because of unusual location in this case.

Case report

A 54 years old male patient, living in Cluj-Napoca, Romania presented to the ambulatory service of Cluj Ophthalmology Clinic, complaining of reading difficulties.

Best corrected visual acuity was normal (20/20) in both eyes. Pupillary reflexes were normal. Both eyes presented normal anterior pole anatomy. Left eye retinal examination revealed well defined and plane optic nerve head and normal aspect of retinal vessels.

Right eye retinal examination revealed well defined and plane optic nerve head, with a moderate retinal atrophy around the optic nerve head (Figure 1). In the superior temporal retina, at one papillary diameter from the optic nerve head there was an well defined whitish-yellow area of thin retina, with the diameter of approximately 3 papillary diameters, surrounded by pigment; some retinal vessels were going across this area, other surrounded it. There was also more pigment disorder in the superior retina. We found normal intraocular pressure in both eyes.

Visual field examination revealed in the normal findings in the left eye. In the right eye there was a large visual field defect corresponding to the area of whitish-yellow thin retina (Figure 2).

Ultrasound examination revealed normal findings in the left eye. In the right eye the examination revealed an area of ultrasound transparency with the dimensions of 7 x 4 mm and a depth of approximately 3 mm in the superior temporal area of the eye (Figure 3).

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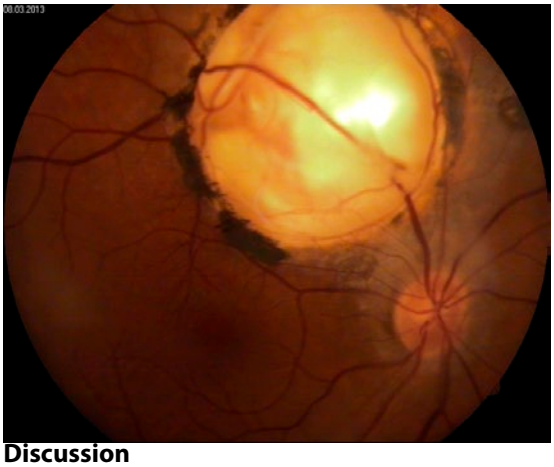

Figure 1. Fundus of the right eye.

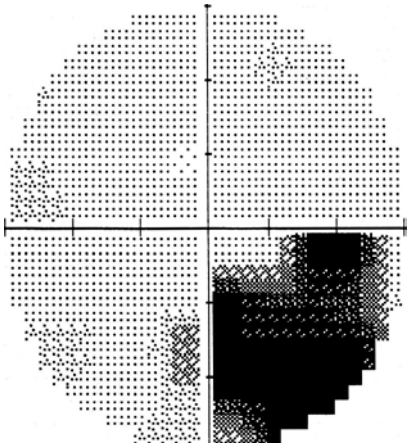

Figure 2. Result of visual field examination of the right eye.

Discussion

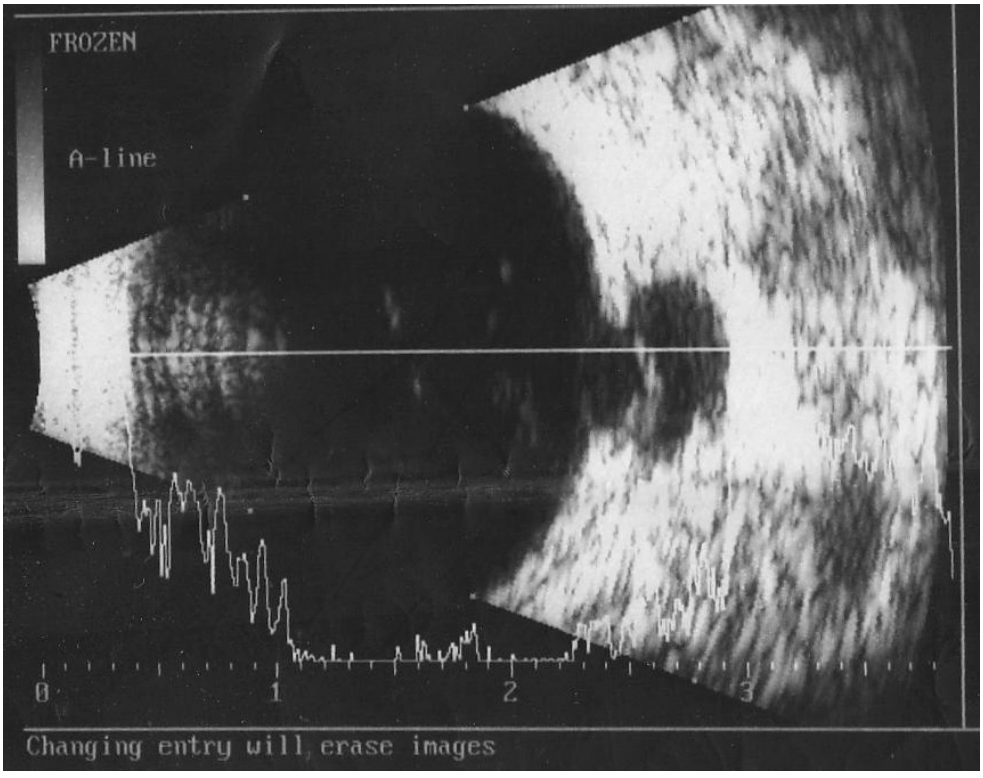

Figure 3. Ultrasound examination of the right eye.

Based on the presented results we established the diagnosis of congenital Ammon protrusion in the right eye.

There are some elements for differential diagnosis:

- Choroidal coloboma is situated inferior and nasal and is extended to the periphery of the fundus of the eye. Sometimes it is surrounded by pigment;
- Posterior staphyloma occurs in malignant myopia;
- Posterior sclera ectasy affects all the posterior pole of the eye; frequently it is associated with microphthalmy.

Congenital Ammon protrusion is an ectasia of the sclera developing in the posterior region of the eye. It was described by von Ammon in 1832 and was postulated to be a congenital condition arising from incomplete closure of the fetal eye cleft. Unusually, in this patient, the protrusion was located in the superior and temporal quadrant of the eye. The sclera was very thin, with posterior ectasia and covered only by a very thin, atrophic retina. Some authors claim that that the margin act as a barrier against retinal detachment (Komoto, 1926), but others claim that this situation may lead to retinal detachment in case of macular rupture of the retina (Chams and Chams, 1984; Wang and Hilton, 1985; Gopal and al, 1991).

Acknowledgements

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