Case Report

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Congenital colloid cyst with astigmatism in adult male patient: a rare case report

Salwa H. Dawabsheh, MD[a], Salma Abed Samamqa, MD[a], Waleed N. Kawazbeh, MD[a], Basel Mohammad, MD[b], Qasim M. Sallam, MD[a], Haya Massoud, DDS[c], Ali Dway, MD[d,*], Asala Mohammad Awaysa, MD[a], Layth Al- Karaja, MD[a]

Introduction and importance: Colloid cysts are rare brain tumors that can cause headaches, memory problems, and vision issues. Early diagnosis and treatment are crucial to prevent complications.

Case presentation: The authors report a case of a patient in their 20s with a 2-year history of headaches and blurry vision. A computed tomography (CT) scan revealed a colloid cyst in the third ventricle. The patient was diagnosed with astigmatism and managed with corrective lenses and regular CT scans.

Clinical discussion: The patient's astigmatism may be linked to the colloid cyst, potentially due to migraines triggered by the cyst's location. Further research is needed to understand this relationship.

Conclusion: This case highlights the potential for colloid cysts to contribute to vision problems. Careful evaluation and individualized management are essential for patients with colloid cysts and vision disturbances.

Keywords astigmatism, colloid cyst, CT scan, foramen of Monroe, migraine, third ventricle

Introduction

Colloid cysts are congenitally occurring benign tumors usually situated at or close to the foramen of Monroe, which is in the anterior side of the third ventricle of the brain. The colloid cyst is a gelatinous-filled cyst with an epithelial lining. The gelatinous substance commonly contains ions, cholesterol, mucin and old blood. Colloid cysts make up 15–20% of all intraventricular masses but only make up 0.2–2% of all intracranial neoplasms[1].

Colloid cysts have a slow growth rate, and the initial symptoms typically appear between the ages of 20 and 50. Colloid cysts can cause various symptoms, including headaches, memory problems, diplopia and vertigo secondary to obstructive hydrocephalus.

Some colloid cysts can be observed without any problems for years or even decades. Others may develop gradually or result in acute or subacute hydrocephalus.

HIGHLIGHTS

- A patient with a colloid cyst presented with headaches and blurry vision.
- The cyst may have triggered migraines, contributing to the patient's astigmatism.
- Further research is needed to understand the link between colloid cysts, migraines, and vision problems.
- This case emphasizes the importance of considering this connection in patients with colloid cysts and vision disturbances.
- Careful evaluation and individualized management are crucial for such patients.

The prognosis is good with complete surgical resection, and colloid cysts rarely return following complete resection[2].

Herein, we report a case of the congenital colloid cyst with astigmatism in a patient in their 20s, and symptoms started within the last 2 years, investigations was done. The plan was to prescribe spectacles with follow-up computed tomography (CT) scan every 6 months.

Case presentation

Patient in their 20s visited the outpatient clinic complaining of intermittent vague headaches mainly in the frontal area of the head that was attributed to recurrent sinusitis in the past 2 years with no relevant nausea, vomiting or neurological symptoms. Also, the patient described a blurred vision that developed gradually during the past year when looking from distance, which he thought was due to prolonged hours of using laptop.

Full ophthalmic examination was done and the visual acuity was 6/6-2 in both eyes. Manifest reaction was 0.25/-0.5AX65 6/6 bilaterally, the pupils were reactive and symmetrical measuring

[a]Al-Quds University, Jerusalem, Palestine, [b]Alexandria University, Alexandria, Egypt, [c]Faculty of Dentistry Al-Andalus University and [d]Faculty of Medicine, Al-Andalus University, Tartus, Syria

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*Corresponding author. Address: AL Thawra street, 71100 Tel.: +963 953 217 067. E-mail: dwayali10@gmail.com (A. Dway).

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3 mm in both sides with no evidence of afferent pupillary defect, and the ocular motility was smooth and followed the instructions.

Confrontation test was full for both eyes, and six prism diopters of exophoria at a distance and near was shown while assessing for tropia and phoria.

On slit lamp examination, the lid and lashes were quiet in both eyes with no conjunctival injections, clear lens, cornea and brown flat iris bilaterally, no flare or cells was found in the anterior chamber that was quiet and deep in both eyes.

The intraocular pressure (IOP) was obtained and both eyes showed readings of 12 mmHg in both eyes, dilated fundus examination was unremarkable.

Further investigation of the patient's headache included ordering multi-detector CT scan of the brain and posterior fossa, the imaging study revealed a small hyperdense cyst measuring 9 mm in diameter seen upon the foramen of Monroe at the top of the third ventricle (Fig. 1), these finding were suggestive of colloid cyst, when compared with the available previous imaging studies the patient went through, MRI of the brain was done 2 years ago and the cyst exhibited the same size and morphology since then.

The diagnosis of compound hyperopic astigmatism was made, and the prescription of spectacles took its place while follow-up with making CT scan every 6 months was the plan for the colloid cyst.

Discussion

Colloid cysts are a rare type of brain tumor that typically develop in the third ventricle of the brain. These cysts have been described as far back as 1858 by Wallmann[3]. The exact origin of colloid cysts remains uncertain; however, they are believed to arise from the diencephalic vesicle or a piece of the embryonic paraphysis[4,5]. The majority of cases are sporadic, but there have been instances of family clusters[6–8]. Colloid cysts most commonly present in individuals between the ages of 30–50[3] and are often associated with severe, intermittent headaches that are relieved by lying flat[3,5,8,9].

Colloid cysts can cause a wide range of symptoms, including elevated intracranial pressure, neuropsychiatric symptoms, normal pressure hydrocephalus, coma, and even sudden death[6]. They have also been associated with more unusual presentations such as gait disturbance, drop attacks, hypopituitarism, dementia, and other neuropsychiatric symptoms[4,6,8]. In somecases, colloid cysts have also been linked to vision problems such as normal tension glaucoma, generalized visual disturbance[10], and defects in the visual field[11].

The foramen of Monro in the third ventricle is a potential site for a colloid cyst to become a choking point, disrupting the flow of cerebrospinal fluid and leading to acute third ventricle occlusion. This can cause a rapid rise in intracranial pressure, brain herniation, coma, and death[3,8,9]. Therefore, early detection and prompt treatment are critical to reduce mortality and morbidity associated with colloid cysts.

In our case, the patient sought medical attention for fuzzy vision caused by astigmatism, along with a history of headaches. Elevated intracranial pressure was ruled out as a cause due to the absence of papilledema, severe headache, or vomiting. The presence of both astigmatism and a headache in conjunction with a colloid cyst raises the possibility of migraine as a contributing factor. Several studies have found a link between migraines and refractive problems[12], most frequently scotomas, zigzag lines, blurry vision, and brightly shining flashes[13]. and it has been reported that a colloid cyst located in the third ventricle can cause

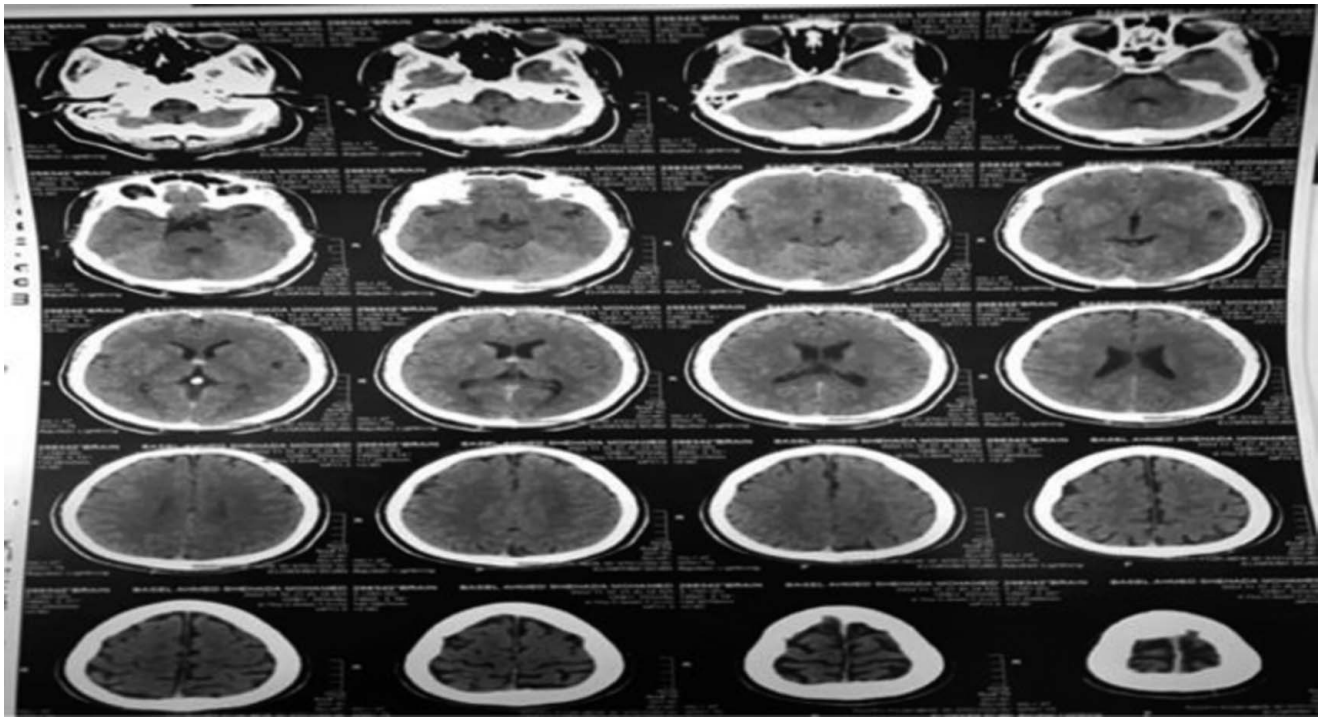

Figure 1. Multi-detector computed tomography scan of the brain and posterior fossa, the imaging study revealed small hyperdense cyst measuring 9 mm in diameter seen upon the foramen of Monro at the top of the third ventricle.

migraines with visual aura (MA)[14]. In some cases, the symptoms of MA have been observed to disappear promptly after the removal of the cyst, providing evidence of a causal link[14].

It is possible that the patient's astigmatism was caused by migraines triggered by the colloid cyst, but further research is needed to fully understand the mechanisms behind this connection.

Conclusion

In conclusion, the current medical case report suggests that the patient's astigmatism may have resulted from migraines triggered by a colloid cyst in the third ventricle. Some studies have reported a correlation between a colloid cyst in this location and MA. However, further investigation is required to fully comprehend the underlying mechanisms of this relationship. This possibility is also supported by the absence of elevated intracranial pressure as the cause of the patient's headache.

Ethical approval

The study is exempt from ethical approval in our institution.

Consent

Written informed consent was obtained from the patient's parents for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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Conflicts of interest disclosure

The authors declare no conflict of interests.

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