Rathke's Cleft Cyst and Psychiatric Symptoms in an Adolescent

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A Rathke's cleft cyst (RCC) is a benign, fluid-filled cyst in the brain.[1] RCC is found in 12%–33% of routine autopsies[1] but rarely produces symptoms.[2] Symptomatic cases may include visual disturbances, headaches, and pituitary dysfunction.[2] There are even fewer reported cases of psychiatric symptoms associated with RCC. We report the case of an adolescent with RCC who has experienced anxiety, psychosis, obsessive-compulsive disorder (OCD) and attention-deficit/hyperactivity disorder (ADHD).

Case Report

The male patient presented to the outpatient clinic at age 12 years. His family history included a grandparent with affective psychosis. There was no known family history of other psychiatric disorders or brain cysts. His psychiatric history included questionable diagnosis of autism (one evaluation supported autism and another did not), normal fragile X testing and chromosomal microarray, and diagnosis of ADHD and treatment with Adderall extended release. His first referral to psychiatry was at age 10 years due to hallucinations, which were ongoing for over a year, prior to starting Adderall XR. There were 2 previous psychiatric hospitalizations, both at age 12 years: one due to obsessive thinking, compulsions (handwashing and extended showers), and visual hallucinations and another after choking himself with a scarf. He later developed anxiety and repeated biting of his fingers.

Magnetic resonance imaging (MRI) of the brain with/without contrast showed a lesion located between the anterior and posterior pituitary (0.7 x 0.6 x 1.2 cm), thought to be RCC without suprasellar extension. Approximately 2 years later, MRI of the pituitary showed a cystic lesion, again thought to be RCC, approximately 0.9 cm in its largest dimension, without suprasellar extension. A subsequent rapid MRI of the brain without contrast did not include detailed sellar imaging but indicated the cyst was approximately 5 mm in height, as compared to 7 mm 2 years earlier.

Hallucinations have continued but are reduced since his initial presentation at age 12 years. ADHD symptoms, anxiety, and OCD symptoms are also generally reduced. Neurologic examinations have been normal, although there has been blurry vision and intermittent dizziness.

He has been treated with varying doses of fluvoxamine and a low dose of clonidine. He was on risperidone before switching to aripiprazole, due to weight gain and prolactin elevation when on risperidone.

Discussion

There are few case reports of RCC associated with psychiatric symptoms. A search with the keywords "Rathke's cleft cyst psychiatric symptoms" for articles in English yielded a case of a 39-year-old patient who had depression, affective psychosis, and visual symptoms that resolved after excision of the RCC.[3] Another case was identified of a 60-year-old patient who developed a delusion of guilt, which improved on risperidone 6 mg/d without neurosurgical intervention.[4] Our case is unique in terms of the breadth of psychiatric symptoms involved and the age of the patient.

In general, there has been a reduction in psychosis, ADHD symptoms, anxiety, and OCD symptoms in our patient. While it is possible that the psychiatric symptoms may have developed even in the absence of RCC, the presence of the RCC and the ongoing psychiatric symptoms call into question whether the RCC is causing or contributing to these symptoms. There is no clear relationship between this patient's symptoms and the specific location of the RCC. Per imaging, there may be some reduction in the size of the RCC, but it is impossible to know whether this is connected to reduction in psychiatric symptoms.

The conundrum in cases of ongoing psychiatric symptoms in the presence of RCC is whether to resect the RCC or to treat with medications with a goal of symptom reduction. Given the lack of studies about RCC and psychiatric symptoms, there is no strong evidence for either decision.

In our case, there is ongoing consultation with neurology, neurosurgery, and endocrinology. There is currently no recommendation to resect the RCC or for noninvasive radiation ablation.

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