



Antrochoanal Polyp with Severe Headache in a Child

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Acute and chronic headaches are common in children. Most headaches can be classified as primary headaches. About 27% of girls and 20% of boys complain of frequent or severe headaches [1]. Chronic headache can be defined when the headache persists for more than 3 months and is accompanied by headache for more than 15 days per month. The probability of chronic headache in children is known to be 2% to 4% in female children and 0.8% to 2% in male children. However, a chronic headache can be excluded from the class of chronic headaches in the case of an underlying disease or structural abnormality [2]. Headaches from structural causes are very rare in children [1]. Nasal polyps are benign polypoidal masses arising mainly from chronic inflammation and edema of the mucous membranes in the nose and paranasal sinuses [3]. The presenting symptoms of nasal polyps include nasal obstruction, rhinorrhea, postnasal drip, anosmia, and headache. Symptoms can vary depending on the site and size of the polyps, but a severe headache is a rare symptom in children [4]. This paper reports a case of antrochoanal polyp with a severe headache in child.

The patient, an 8-year-old girl, complained of a headache that had been present for approximately 3 months. Symptoms worsened one month ago, and there the analgesic did not have an effect. The headache was usually a dull pain

on the whole area of the head, with the greatest pain on the left parietal region, and each episode lasted for about 4 hours. There was no aura, and symptoms were aggravated by walking or moving the temporomandibular joints when eating. The symptoms were relieved when the patient was lying down and resting. The patient did not experience discomfort due to symptoms such as nasal obstruction or rhinorrhea, but she could not consume any food due to the pain. The patient reported having previously been healthy and had no history of allergy. Her family history was nonspecific. At the time of admission, the patient's blood pressure was 110/66 mm Hg, and there were no abnormal findings from the physical examination. We obtained brain magnetic resonance image (MRI) for a severe headache, which revealed sinusitis in the left ethmoidal, and both sphenoidal and right maxillary sinus and nasal polyp in the left sphenoidal recess (Fig. 1A and B).

We consulted the department of otorhinolaryngology and executed paranasal sinus computed tomography, which revealed an antrochoanal polyp in the left sphenoidal recess with sphenoid sinus widening, and associated sinusitis in the left ethmoidal and sphenoidal sinuses (Fig. 1C and D). The patient was taken to the endoscopic sinus surgery for the removal of polyp, and the endoscopic examination yielded

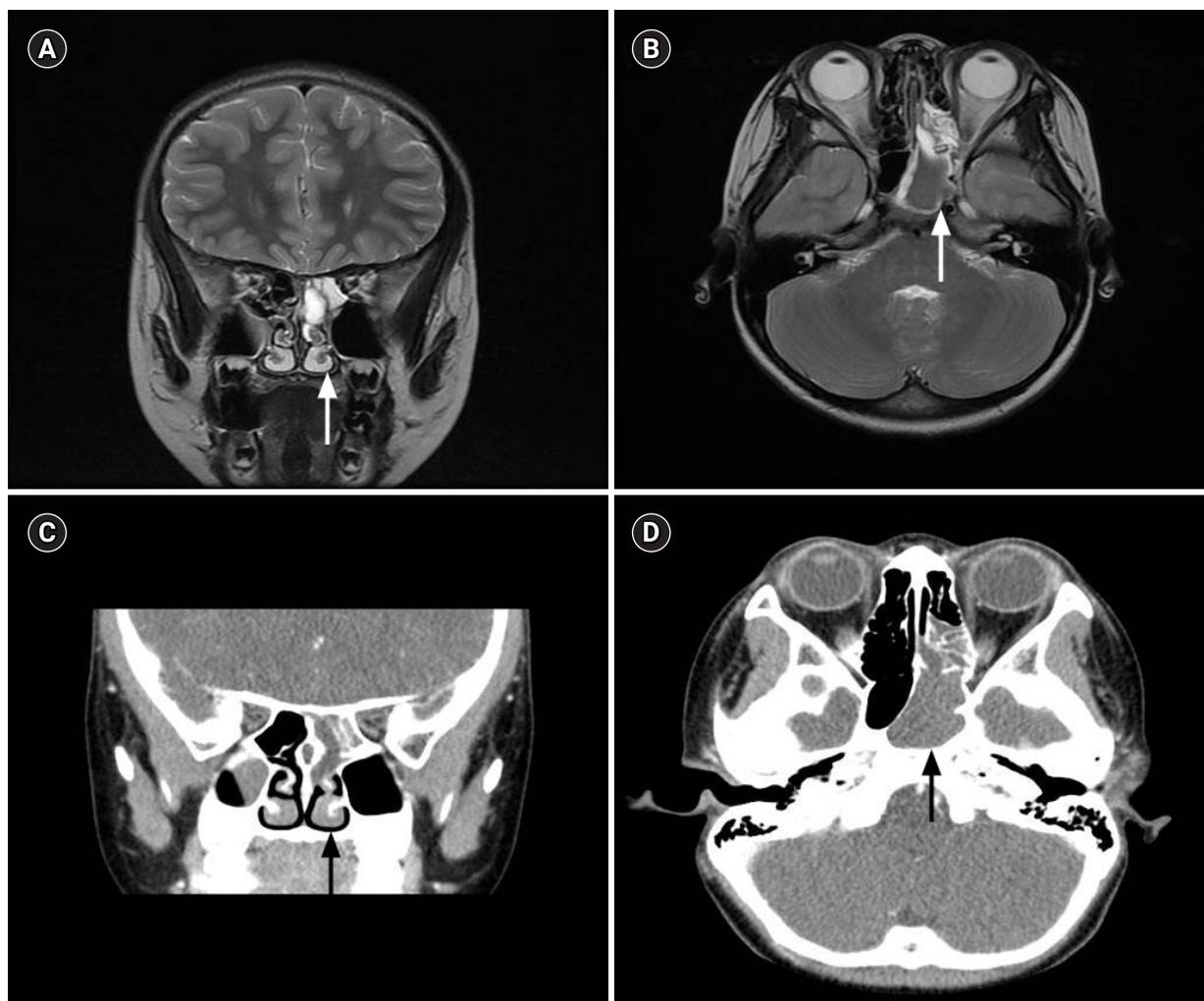


Fig. 1. Brain magnetic resonance image showed (A, B) sinusitis in the left ethmoid, sphenoid, right maxillary sinus, and nasal polyp in the left sphenoidal recess (white arrows) and (C, D) Paranasal sinus computed tomography showed antrochoanal polyp in the left sphenoidal recess with sphenoid sinus widening (black arrows), and associated sinusitis in the left ethmoid and sphenoid sinuses.

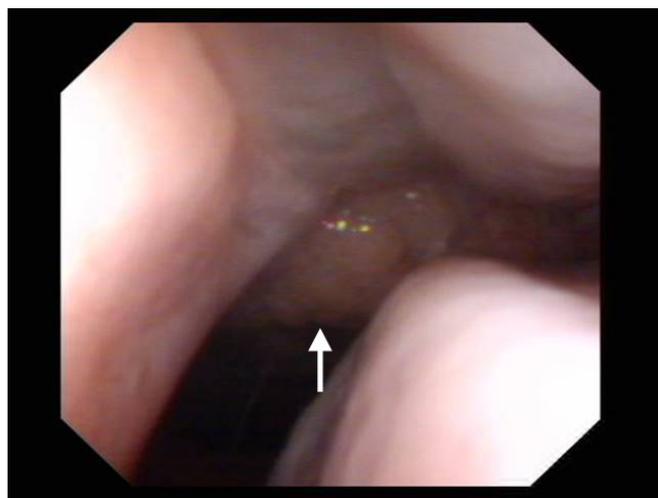


Fig. 2. Left nasal cavity endoscopic view showed antrochoanal polyp (white arrow).

the diagnosis of antrochoanal polyp (Fig. 2). After surgery operation, the patient progressed very well and experienced complete relief of her severe headache without any additional medication including analgesic and antibiotic therapy. She remained asymptomatic and disease-free, at the 4-month follow-up.

Nasal polyps can be seen in 0.2% to 1% of the total population, of which antrochoanal polyps account for 33% of children. The most common nasal polyp is cystic fibrosis. However, cystic fibrosis is mainly observed in children younger than age 12. Antrochoanal polyp is the most common type of choanal polyp, and the most common symptom is obstruction of the nasal passage. Symptoms such as rhinorrhea, epistaxis, and allergy-related symptoms may also be present. As in our case, polyp can cause obstructive sleep symptoms, proptosis, and diplopia. Headaches can be seen in 15.7% of children and 37.5% in adults [4]. How-

ever, it is not easy to distinguish between headaches attributed to polyps or chronic headaches. A report on the relationship between chronic daily headaches and quality of life (QOL), shows that QOL decreases as the use of analgesics increases. It is known that the progression to chronic headache rather than the intensity of pain affects QOL more. It is also known that 25.4% of chronic headache patient have experienced drug overdose [5]. Therefore, it is necessary to provide proper evaluation and management for secondary headaches. In the case of antrochoanal polyp, such as those which our patient had, surgery can be the primary treatment [3]. However, these surgical approaches require long-term prognosis study and follow-up because of the risk of developing teeth, bone growth and facial hyperesthesia, but the research involving children is still limited [4]. In our case, the patient, who was consistently medicated but no improvement of signs, did not complain of a headache after endoscopic polyp removal. Therefore, after surgical treatment, headache improved rapidly, and the origin of headache attributed to disorder of the nasal septum, mucosa, and infection could be excluded.

On histopathology, allergic polyps are more common in children than are inflammatory polyps. Therefore, medical treatment such as oral and topical nasal steroid administration may necessary if allergy polyps are present [4]. However, as in our case, the headache was completely relieved without common symptoms, such as nasal obstruction and rhinorrhea even though there was no additional antibiotic therapy.

In summary, this case presents a child patient with antrocho-

anal polyp and severe headache symptoms. She was diagnosed based on clinical features and brain MRI. The surgery completely relieved her severe headache.

Conflicts of interest

No potential conflicts of interest relevant to this article was reported.

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