CASE REPORT

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Antrochoanal polyp originating from sphenoid sinus causing acute dysphagia

Abstract Antrochoanal polyps are not uncommon in childhood and adolescence. Usually they arise from the maxillary sinus, but they also can arise from the turbinates or other sinus cavities including the sphenoid sinus cavity. We present such a case to underscore this less common site of origin of sphenchoanal polyps.

Key words Polyp – Child – Sphenoid sinus

Case report

A 14-year-old black female presented to our emergency department with a 2-week history of “trouble with my throat.” She did not complain of any pain but said she had difficulty swallowing and eating. On further questioning it appeared that her voice also had been changing over the last 2 months and was more drastically altered over the last 2 or 3 weeks. Indeed, on presentation her voice was somewhat muffled and she had difficulty enunciating all words correctly. In addition the patient related that approximately 1 year previously, while asleep, she woke up coughing and choking and coughed up what she described as being a mass of “golf ball size, hard as a rock”. She said it filled her mouth and that she could not swallow or talk, and had difficulty breathing. She was taken to her local emergency room, where she was examined clinically and radiographs of the neck and chest were obtained. The results of these X-rays were not available at the time of presentation to our emergency room, but the patient related that she was told that the thing in her mouth was “part of her body” and that it would go back down. She was hospitalized over the next 3 days, no definite diagnosis was established, and she did indeed, eventually reswallow the object. At that time, since she was complaining of no other problems, she was discharged.

The next episode was the occasion of her presentation to our emergency room. At that time she denied any vomiting, any fever, rhinorrhea, or other findings that would suggest an upper respira-

![Image](image.png)

Fig. 1 Lateral view of the neck. Note the large, oval-shaped mass (arrows) occupying the entire hypopharynx and extending down to the level of the epiglottis and glottis

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Fig. 2A–C  CT study of hypopharynx. A Slice through the hypopharynx demonstrates the large, slightly heterogeneous mass occupying virtually all of the hypopharynx (arrows). A central dense area eventually could be followed to the stalk. B Slightly higher slice demonstrates the stalk (arrow) in the posterior nasal passage. Note that the maxillary sinuses are clear. C Final slice demonstrates the sphenoid sinus (S), on the ipsilateral side to be opacified

On physical examination all of the patient’s vital signs were normal and no abnormal physical findings were elicited except for those relating to examination of the nasopharynx and oropharynx. Here, a large, glistening mass was seen to fill the entire posterior hypopharynx. It displaced the uvula anteriorly and inferiorly. There were no exudates around the mass, but the entire hypopharynx, along with the mass, were slightly congested.

In terms of laboratory studies, the white blood cell count was 9,600/mm³ with a normal differential. The hemoglobin was 11.7 g% while the hematocrit was 35.1%. No other laboratory investigation was performed but a chest X-ray and an X-ray of the lateral neck were obtained. The chest X-ray was normal but the lateral view of the neck demonstrated a large oval-shaped mass occupying the entire hypopharynx down to the level of the epiglottis, displacing the uvula anteriorly (Fig. 1). Subsequently a CT study of the nasopharynx was obtained and this confirmed the presence of a large mass, virtually occluding the entire hypopharynx (Fig. 2A). A hyperintense, central stalk appeared to be present and extended along the inferior aspect of one of the ipsilateral turbinates, up to the base of the sphenoid sinus (Fig. 2B). The ipsilateral sphenoid sinus itself was opacified (Fig. 2C) while the remaining sinus cavities, including the maxillary sinuses, were completely clear. The patient subsequently underwent nasal endoscopy whereupon the suspected mass was easily encountered. The stalk of the mass appeared to extend along the undersurface of the inferior aspect of the superior turbinates on the left, and then passed to the base of the ipsilateral sphenoid sinus cavity. The stalk was transected at this level and the polyp was removed without incident. Final pathologic diagnosis was that of antrochoanal polyp.

Discussion

Antrochoanal polyps are not uncommon in childhood and it is believed that they are more related to infection and inflammation than allergy, with the basic histologic picture being one of edematous hypertrophy of the respiratory epithelium [1]. These polyps characteristically arise from the maxillary sinuses, and as they grow through the sinus ostia they extend into the posterior hypopharynx. They can be silent for long periods of time, but eventually, as they become larger, they can cause difficulty with breathing or swallowing. In our patient, the episode 1 year prior to evaluation in our emergency room, of coughing up a "golf-ball-size" hard mass, was significant, and such presentation has been documented by others [2, 3].

In our emergency department, the lateral view of the airway clearly demonstrated the presence of a hypopharyngeal mass (Fig. 1). It was somewhat oval in shape and on CT appeared to have a stalk extending all the way to the base of the ipsilateral sphenoid sinus (Fig. 2). The remaining sinus cavities were completely clear, including