Sphenochoanal Polyp: A Rare Entity

Mainak Dutta, Soumya Ghatak, Indranil Sen, Ramanuj Sinha, Lalit Ray, Jayanta Saha

ABSTRACT: Sphenochoanal polyp (SC polyp) is a rare entity and is confused with the more common antrochoanal polyp (AC polyp). Clinically and histopathologically they are similar and can be distinguished with imaging studies (CT, MRI) and diagnostic nasal endoscopy. Identification of the offending sinus is important for complete debridement. Endoscopic sinus surgery forms the cornerstone in the surgical management of SC polyp. A case of SC polyp in an adolescent boy is presented here and literature reviewed.

Key Words: Sphenochoanal polyp, Choanal polyp.

INTRODUCTION: Polyps are oedematous hypertrophied mucosa of nasal cavity and paranasal sinuses, and those that involve the choana are called choanal polyps. While AC polyps, constituting 3-6% of all polyps, are common in clinical practice, other varieties, like SC polyp, are seldom seen.

CASE REPORT: A 15-year-old boy presented with one year history of nasal obstruction and nasal intonation of voice. On anterior rhinoscopy, a polyp could be seen in left nasal cavity at the level of middle turbinate fully occluding the left nasal cavity, and partially the right one. This was associated with mucopurulent secretions mainly on left side. There was no cranial nerve palsy and no history of epistaxis. X-ray nasopharynx (lateral view) showed a mass at the level of the choana, with a rim of air-shadow posteriorly [Fig-1]. X-ray of paranasal sinuses (occipitomental view) revealed clear maxillary sinuses and hazy nasal cavities (left>right). CT scan clearly revealed opacity in the left sphenoidal sinus communicating with the extrasinus mass [Fig-2]. SC polyp was thus diagnosed. Routine pre-operative investigations were done. Under general anaesthesia, mobility of the mass was assessed. Next, the nasendoscopes (4mm scopes, 0° and 30° respectively) were introduced and negotiated superomedial to the middle turbinate. The sphenoethmoidal recess was identified and the stalk of the polyp was seen around the anterior sphenoidal wall. The stalk was excised, the sphenoidal ostium widened medially and inferiorly, and the intrasinus polypoid mucosa debrided as far as possible. The mass, 4cm×3cm in dimension, was pushed back to the nasopharynx and taken out via oropharynx [Fig-3]. It weighed 39gms. Haemostasis was controlled and anterior nasal packing done with merocel. Histopathology revealed benign inflammatory polypoid mass with scattered eosinophils. The patient recovered well and the one year follow-up period turned out uneventful.

DISCUSSION: SC polyps are one of the rare varieties of choanal polyps. Since the days of Zuckerkendl in 1892, only a few cases have been reported till date. Often Department of Otorhinolaryngology and Head-Neck Surgery *R. G. Kar Medical College and Hospital, Bengal, **Asansol Subdivisional Hospital, West Bengal, ***Malda Medical College and Hospital, West Bengal, India.

Fig-1: The arrow in this X-ray nasopharynx (lateral view) showing soft tissue bulge.

Fig-2: The CT scans (coronal view) showing opaque left sphenoidal sinus, with the mass encroaching the ipsilateral nasal cavity.
Repeated and unhindered tissue restructure and remodelling result in mimicking a mesenchymal disarray in the form of stromal atypia and pseudosarcomatous changes in the polyp\textsuperscript{13,14}. Definitive diagnosis of a SC polyp can only be made with CT and MRI scan\textsuperscript{15,16,17}. They can trace the polyp to its origin and can differentiate choanal polyps from other related masses by intensity discrimination. If the maxillary sinuses are clear and sphenoidal sinus opaque, the choanal polyp should originate from the sphenoidal sinus. However, establishing the sinus of origin is always of pivotal importance\textsuperscript{17}. This can be done in 3 ways.-1) With respect to the middle turbinate: SC polyp lies between the septum and medial aspect of middle turbinate. 2) The ostial opening is looked for widening and contiguity of the intranasal mass with the choanal mass should subsequently be established. 3) The major landmarks in the natural pathway of the polyps should be looked for involvement-ostiomeatal complex for AC polyp, and sphenethmoidal recess for SC polyp. Diagnostic nasal endoscopy, in cases, has met with limited success, largely due to steric hindrance. Navigation of the probe often becomes cumbersome due to the large polypoid mass in one nasal cavity and the resultant septal deviation almost occluding the other. However, histopathology always has the final say in diagnosis. The treatment of choice of SC polyp is surgery, with the aim to remove both intranasal and intrasphenoidal parts\textsuperscript{7,17}. Traditional methods (polypectomy, avulsion) are associated with increased chances of recurrence as high as 25\%\textsuperscript{4,18}. Transnasal/endonasal endoscopic sinus surgery forms the cornerstone among the surgical procedures\textsuperscript{19}. Identification of the sphenoidal ostium is of immense importance as it is variable in position on the anterior sphenoidal wall, and rarely a SC polyp may originate from extra-ostial adjacent areas (like sphenethmoidal recess) and may remain confined within the sinus. Care should be taken to avoid injury to the optic nerve and internal carotid artery. If a microdebrider is not used, excision of the stalk of the polyp too close to the ostium before its widening has the danger of losing track of the mucosal pedicle which retracts within the sinus. A good view within the sinus is obtained and the mucosa meticulously extirpated. In conclusion, SC polyp is one of the rare forms of choanal polyps. Imaging like CT scan and MRI are essential for diagnosis, with the ultimate aim of finding the polyp’s sinus of origin. This is followed by transnasal endoscopic removal of the mass along with the sinus mucosa taking due care that it neither injures any vital structure nor does it results in recurrence.

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