

Unusual Case of Large Antrochonal Polyp Causing Airway Obstruction Post Induction of Anaesthesia

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Abstract: *Antrochonal polyps are very frequently found in children and young adults with features of nasal obstruction and mouth breathing. This is an unusual case of antrochonal polyp causing sudden respiratory airway collapse after induction of anaesthesia. Though the polyp was successfully removed by functional endoscopic sinus surgery under general anaesthesia.*

Keywords: airway obstruction, FESS, antrochonal polyp

1. Introduction

Antrochonal polyps (ACP) are the benign polypoidal masses arising from maxillary sinus and extend from the ostium to the middle meatus, choana and nasopharynx. Choanal polyps are found in children and young adults and are the most common cause of nasal obstruction and nasal discharge. The other unusual presentations are change in voice, dysphagia and obstructive sleep apnea.

The close association of antrochonal polyps and maxillary sinus was first reported by Killian [1] in 1906 when he found that their origin is from maxillary sinus ostium but not from inside of cavity.

2. Case History

A 15 years old young girl, known case of nasal polyp for 5 years, reported to our hospital with complaints of nasal obstruction, change in voice, snoring for more than a year. Recently she started with complaints of difficulty in swallowing solids and foul smell from mouth and also with pain in the throat with blood tinged sputum and blood in stools past one week. Patient was reevaluated by Gastroenterologist for recent onset hematemesis and melena. On examination a polypoidal mass seen in the right nasal cavity extending to right choana and oropharynx. The lower limit of the mass can not be visualized in the oral cavity. CT sinuses coronal confirms the swelling as antrochonal mass arising from maxillary sinus and extending to nasopharynx, right nasal cavity, right choana, right anterior ethmoidal air cells, and sphenoidal sinus superomedial. Patient was planned for endoscopic removal under general anaesthesia. Patient was premedicated with oral alprazolam and ranitidine at night and in the morning of surgery. Patient was placed with standard monitoring devices, preoxygenated for few minutes and induced with induction dose of Propofol with prior IV glycopyrrolate, ondansetron and fentanyl. Patient was ventilated with oxygen and sevoflurane. As soon as the patient was given succinyl choline within few seconds patient started desaturating and ventilation could not be maintained. The

intubation was attempted without waiting for the action of muscle relaxant. The patient had already desaturated to



Figure 1 & 2: Antrochonal polyp measuring 8cm, 5cm & 3cm dimensions

Spo2 of 45%. Patient was intubated with slight manipulation and ventilated till Spo2 restored to 98%. Oropharyngeal packing was done for bleeding and secretions intraoperative. Anaesthesia maintained with oxygen, nitrous oxide and sevoflurane and vecuronium till conclusion of surgery. At

the end of surgery, the muscle relaxant was reversed with neostigmine and glycopyrrolate. The patient was extubated after confirming complete recovery from effects of muscle relaxants. Patient shifted to post-operative room and monitored for any desaturation, bleeding and airway obstruction. The post op recovery was uneventful.

3. Discussion

Our patient presented with unusual complaints of malena, hematemesis, difficulty in swallowing, foul smell from mouth along with persistent complaints of nasal obstruction, mouth breathing, snoring and change in voice for almost a year. The patient also received conservative treatment for nasal polyp in the past. At times the symptoms may be unusual to their appearance like epistaxis [2], Malena and hematemesis. Antrochonal polyps in rare cases do present with symptoms as described by our patient. These unusual symptoms indicated the wide extension of antrochonal polyps beyond the maxillary sinus involving the nasal cavity, choana and oropharynx. The presence of melena and hematemesis rather misguided the diagnosis and opinion of gastroenterologist was sort after. The large ACPs are known to pose problems to maintain airway causing respiratory obstruction [3] under anaesthesia. The appropriate airway assessment prior to surgery and preparation for the difficult airway was missed in our case due to inadequate history taking and assessment at PAC by our residents. The gravity of the situation was only realized during induction when there was sudden collapse of the airway and maintenance of airway became difficult. Though the intubation was easier after short acting muscle relaxant. The lessons learnt from the present case seem to be more practical in nature and mandates an elaborate knowledge and adequate planning prior to taking up such cases. No case be accepted as a simple unless proved otherwise.

The treatment of antrochonal polyps is almost always surgical. The antrochonal polyps may regress with medication only in very few cases [4]. The most common method of treating by simple polypectomy without involving the sinus have resulted in recurrences mainly due to insufficient resection of the intramaxillary portion of the polyp. In nutshell, any diagnosed case of nasal polyp with extensions to various structures in vicinity should be evaluated and a planned anaesthetic strategy to be formulated in advance. Endoscopic sinus surgery has been accepted to be a safe and effective method for treating antrochonal polyps in adults and children. It mainly involves resection of the nasal part of the polyp and the cystic antral part extending into the maxillary wall *via* the middle meatus [5]. In our case also endoscopic sinus surgery for antrochonal polyp was undertaken for the first time in our institution.

References

- [1] Killian G. The origin of antrochonal polyp. Lancet 1906; 2: 81–2.
- [2] Sayed RH, Abu-Dief EE. Does antrochonal polyp present with epistaxis? J Laryngol Otol 2010; 124: 505–9

- [3] Shashinder S, Kuljit S, Suhba ST, Arumainathan UD, Gopala KG. Intermittent respiratory obstruction secondary to an antrochonal polyp: a rare late presentation. Med J Malaysia. 2007 Mar;62(1):72-3.
- [4] Seshadri R. Antrochonal polyp: a case report of treatment with intranasal steroids. J Laryngol Otol 1995; 109: 553–4.
- [5] Ozer F, Ozer C, Cagici CA, Canbolat T, Yilmazer C, Akkuzu B. Surgical approaches for antrochonal polyp: a comparative analysis. B-ENT 2008; 4: 93–9.

Author Profile

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