CASE REPORT

Bilateral antrochoanal polyp: report of a new case and systematic review of the literature

Omar Iziki*, Sami Rouadi, Redallah Larbi Abada, Mohamed Roubal, and Mohamed Mahtar

Department of Otorhinolaryngology, Head and Neck Surgery, King Hassan II University & Ibn Rochd Hospital, Morocco

*Correspondence address. Department of Otorhinolaryngology, Head and Neck Surgery, King Hassan II University, Ibn Rochd Hospital, Casablanca, Morocco. Tel.: +212-0613953181; Fax: +212-05 22 92 80 21; E-mail: omar.iziki@gmail.com

Abstract

Antrochoanal polyp (ACP) is a benign, rare, and generally unilateral tumor which originates from the maxillary sinus mucosa. Bilateral ACP is extremely rare. Only few cases have been documented in the literature until 2018. The authors report the case of a 44-year-old woman, who presented with a bilateral progressive nasal obstruction for the past 2 years, slight headache and a decreased sense of smell has been started in last four months. Nasal endoscopy revealed pale polypoidal masses in nasal cavities, arising from each middle meatus and extending to the nasopharynx. Computed tomography of the paranasal sinuses revealed the presence of soft-tissue masses in the maxillary sinuses, passing through the maxillary ostium, and extending into the corresponding nasal cavities, and posteriorly upto the nasopharynx. The other sinuses were normally aerated. The tumors were removed surgically with a nasal endoscopy technique. Histopathology examination the two lesions revealed benign inflammatory nasal polyps.

INTRODUCTION

Antrochoanal polyp is a benign tumor that originates from the maxillary sinus mucosa, prolapses into the nasal cavity through the maxillary ostium, and may reaching the choana and nasopharynx. It was described for the first time by Professor Gustav Killian, in 1906 [1].

Antrochoanal polyps are generally unilateral in occurrence and are mostly seen in children and adolescents, bilateral antrochoanal polyp are extremely rare [2]. Only 11 cases have been reported in the English scientific literature until April 2017. In this article, we presented a new rare case of bilateral antrochoanal polyp.

CASE REPORT

We report the case of a 44-year-old female patient, without important pathological antecedents (no history of associated asthma or allergy), who was referred to our ENT clinic with a 2-year history of bilateral progressive nasal obstruction, slight headache and a decreased sense of smell has been started in last four months. She denied other nasal symptoms such as rhinorrhea, epistaxis, stenutation crises, itching, and no otoligique or pharyngolaryngeal symptoms.

Anterior rhinoscopy and nasofibroscopy revealed pale polypoidal masses in both nasal cavities, arising from each middle meatus and extending to the nasopharynx (Fig. 1). Computed tomography of the paranasal sinuses disclosed an almost complete opacification of the maxillary sinuses and the presence of a soft-tissue masses passing through the maxillary ostium and extending into the corresponding nasal cavities and posteriorly upto the nasopharynx. The other sinuses were normally aerated (Fig. 2).

Received: February 5, 2019. Accepted: February 22, 2019

Published by Oxford University Press and JSCR Publishing Ltd. All rights reserved. © The Author(s) 2019. This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact journals.permissions@oup.com
Surgery was performed exclusively by nasal endoscopy, and the polyps were removed under general anesthetic using functional endoscopic sinus surgery (FESS) with bilateral uncinectomy, middle meatal antrostomy and bilateral polypectomy.

Histopathologic examination the two lesions revealed benign inflammatory nasal polyps. The patient experienced a complete recovery with resolution of complaints and no recurrence one year postoperatively.

**DISCUSSION**

Antrochoanal polyps are infrequent benign nasal masses, it’s a unilateral condition mainly affecting young people, representing between four to six per cent of all nasal polyps [3].

The pathogenesis and etiology of ACPs are still unknown [4]. In 1988, Berg et al. hypothesized that ACP could arise from an antral cyst [5]. Recently, Frosini et al., in the largest study of 200 cases, suggested that, in a patient with a pre-existing silent antral cyst, an association of inflammatory-anatomical alteration at ostio-meatal complex/middle meatus level, can forced the polyp to herniate outside, through the accessory ostium [1].

It is important to note that ACP can be associated with same chronic inflammatory condition (allergic or infectious), but the factors of cause and effect remain controversial [3].

Macroscopically, the antrochoanal polyp is composed usually of three part: a cystic or antral part filling the maxillary sinus and a solid part arising from the natural or accessory maxillary ostium into the middle meatus (nasal part), and choanal part [1].

Cases of bilateral ACP are extremely rare. In 1995, Myatt and al. described the first bilateral ACP in a fit 12-year-old child [2]. In order to obtain more relevant information on this seemingly rare entity, we performed a literature review without language restriction. Our search was conducted in PubMed (up to January, 2018) using the following terms: (Antrochoanal polyp OR bilateral antrochoanal polyp). only eleven articles have been documented in the literature until 2018, that reported 11 cases. Available clinical data were extracted from these articles and summarized in Table 1. Our case was added for analysis purposes.

| Authors            | Age(years)/sex | Clinical presentation                     | Surgical approach            | Histology | Recurrence | Time of follow-up |
|--------------------|----------------|------------------------------------------|------------------------------|-----------|------------|-------------------|
| Myatt and Cabrera  | 12/F           | nasal obstruction + rhinorrhoea           | FESS                         | Benign    | No         | 3 months          |
| Basu [4]           | 12/F           | nasal obstruction                        | Caldwell-Luc operation       | Benign    | No         | 6 months          |
| Jmeian [5]         | 6/F            | Nasal obstruction                        | FESS                         | Benign    | No         | 6 months          |
| Konstantinidis [6] | 49/F           | Nasal obstruction                        | FESS                         | Benign    | No         | 6 months          |
| Yilmaz et al. [7]  | 24/F           | Nasal Obstruction rhinorrhea             | FESS                         | Benign    | No         | 12 months         |
| Sousa et al. [3]   | 37/M           | Nasal obstruction                        | Caldwell-Luc Approach and    | Benign    | No         | 6 months          |
|                    |                |                                          | FESS                         |           |            |                   |
| Singhal and Gupta  | 32/F           | Nasal obstruction                        | FESS                         | Benign    | No         | 4 months          |
| Sabino et al. [9]  | 48/M           | Nasal obstruction                        | FESS                         | Benign    | No         | —                 |
| Chodankar and Tiwari [1] | 57/M     | Nasal obstruction rhinorrhea, hyposmia  | FESS                         | Benign    | No         | —                 |
| Oner et al.        | 20/M           | headache rhinorrhea, hyposmia            | FESS                         | Benign    | No         | —                 |
| Iziki et al.       | 44/F           | Nasal obstruction headache, hyposmia     | FESS                         | Benign    | No         | 12 months         |
We identified ten cases of bilateral ACP, eight females, three males, and patients’ mean age was of 28, ranging from 6 to 57 years. The most common symptom was nasal obstruction. Other symptoms were purulent rhinorrhea, pain, epistaxis or bloody nasal discharge, and sore throat. In all cases the diagnostic is made by nasal endoscopy (polypoid tumor emerging from each maxillary sinus through widened ostia and extending to the nasopharynx), and computed tomography (CT). One surgical procedure was sufficient to eradicate polyps in all cases. Functional Endoscopic Sinus Surgery was used to remove polyps in nine cases, Caldwell-Luc operation in one case, and together in one case. No major complications occurred, and no recurrence reported. All polyps were described as inflammatory or benign polyps at histological examination. (Table 1)

Bilateral ACP can be especially confused with chronic rhinosinusitis with polyps. A biopsy is mandatory for histopathological confirmation [1].

CONCLUSION

In conclusion, bilateral ACP is a rare entity; endoscopic examination and computed tomography scan are the gold standard tests for diagnosing and adequate preoperative evaluation. The surgical treatment is mandatory, and endoscopic surgery is actually the approach of choice.

CONFLICT OF INTEREST STATEMENT

None.

REFERENCES

1. Chodankar S, Tiwari M. Bilateral antrochoanal polyp in an elderly male—a rarity. Odisha J Otorhinolaryngol 2015;9.
2. Myatt HM, Cabrera M. Bilateral antrochoanal polyps in a child: a case report. J Laryngol Otol 1996;110:272–4.
3. Sousa W, Pinheiro D, da Silva C, Bastos PC. Bilateral antrochoanal polyps in an adult. Braz J Otorhinolaryngol 2011;77:539.
4. Basu SK, Bandyopadhyay SN, Bora H. Bilateral antrochoanal polyps. J Laryngol Otol 2001;115:561–2.
5. Jmeian S. Bilateral Antrochoanal polyps in a child: an extremely rare case. JRMS 2006;13:57–8.
6. Konstantinidis I, Tsakiropoulou E, Vital I. Bilateral antrochoanal polyps originated from inferior meatal antrostomies. Laryngo-Rhino-Otol 2008;87:417–9.
7. Yilmaz YF, Ttitiz A, Özcan M, Tezer MS. Bilateral antrochoanal polyps in an adult: a case report. B-ENT 2007;3:97–9.
8. Singhal P, Gupta N. Bilateral antrochoanal polyp in an adult: a rarity. Clin Rhinol 2011;4:145–6.
9. Sabino HA, Faria FM, Tamashi E, Lima WT, Valera FC. Bilateral antrochoanal polyp: case report. Braz J Otorhinolaryngol 2014;80:182–3.