Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Medicine

Nasal Polyps Complicated by Woakes Syndrome Three Case Reports

Hamza Benjelloun[1*], Mohammed Rami[1], Omar Oulghoul[1], Mohamed Chehbouni[1], Youssef Lakhdar[1], Youssef Rochdi[1], Abdelaziz Raji[1]

[1]Cadi Ayyad University, Faculty of Medicine and Pharmacy of Marrakech, ENT Head and Neck Surgery Department, University Hospital Mohammed VI, Marrakech, Morocco

DOI: https://doi.org/10.36347/sjmcr.2025.v13i05.031 | **Received:** 25.03.2025 | **Accepted:** 03.05.2025 | **Published:** 15.05.2025

***Corresponding author:** Hamza Benjelloun
Cadi Ayyad University, Faculty of Medicine and Pharmacy of Marrakech, ENT Head and Neck Surgery Department, University Hospital Mohammed VI, Marrakech, Morocco

Abstract | **Case Series**

Woakes syndrome is a rare disorder characterized by severe relapsing chronic sinusitis leading to nasal polyps, which cause progressive deformation of the nasal pyramid due to persistent inflammation and pressure. This article presents three clinical cases of patients diagnosed with Woakes syndrome and highlights the importance of a well-conducted medical treatment and a pertinent surgical approach in halting disease progression while achieving functional and aesthetic improvements.

Keywords: Woakes Syndrome, Nasal Polyps, Rhinoplasty, Chronic Sinusitis.

INTRODUCTION

Chronic rhinosinusitis with nasal polyposis is a complex inflammatory condition of the mucosa of the nasal cavities and sinuses. It is a common, benign condition affecting between 1% and 4% of the population. Its pathophysiology remains poorly understood, Woakes syndrome is a very rare disorder defined as severe relapsing chronic sinusitis leading to nasal polyps, responsible of the deformation of the nasal pyramid due to ongoing pressure and inflammation due to the size of the polyp [1].

CASE REPRESENTATIONS

Case 1

The patient was 40 years old, with Samter syndrome. For 13 years, bilateral permanent nasal obstruction, associated anosmia and clear anterior rhinorrhea with no facial pain or epistaxis and without any other ENT or extra-ENT sign, all evolving in a context of apyrexia. clinical examination found smooth, translucent yellow grape-like polyps extending into the nasal vesibula responsible of deformity of the nasal pyramid (figure1), neurological, ophthalmological and oral cavity examinations are normal.

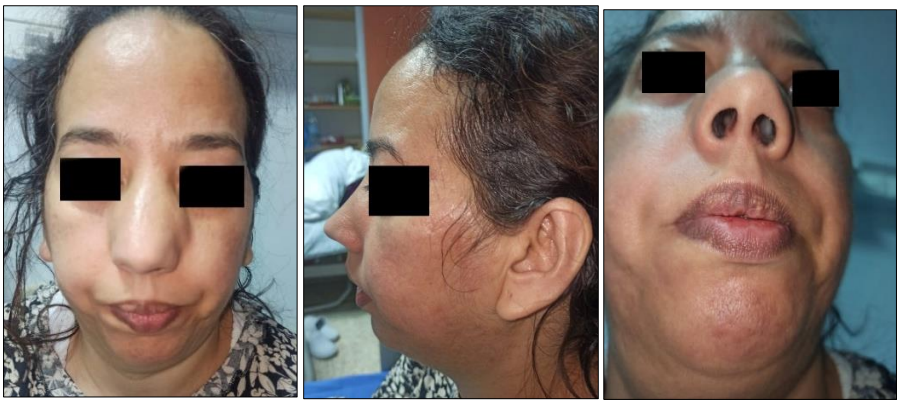

Figure 1: clinical representation of the first case showcasing the nasal pyramid deformity and visible nasal polypls throughout the nostrils

CT scan showed bilateral and symmetrical filling of the ethomidal cells and the entire nasal cavity with reactive filling of the other facial sinuses and deformation of the proper nasal bones (figure2).

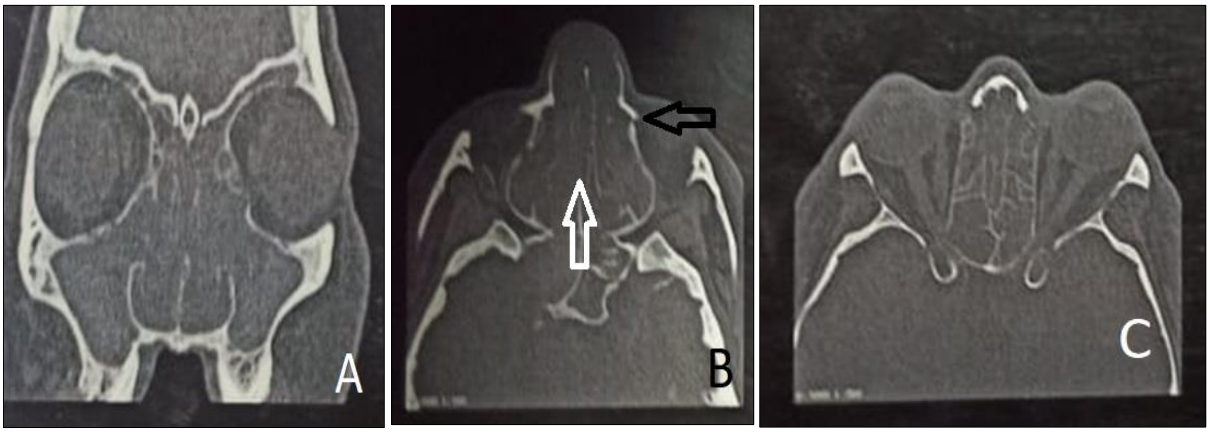

Figure 2: computed tomographic scan of the patient A: coronal cut showing nasal polyps with enlargement of the nasal bone, B: axial cut passing though the nasal bones (black arrow) and the filling of the ethmoidal cells (white arrow), C: axial cut passing though the orbites

Endoscopic nasal approach consisted of bilateral polypectomy, bilateral maxillary sinus fenestration and functional bilateral ethmoidectomy. An external reduction of the nasal bone was performed to address the nasal deformation. then we applied a nasal splint for 3 weeks, the post-operative follow-up was simple, there was no epistaxis, no signs of infection and no ophthalmological or neurological complications the patient was subsequently put on a medical treatment based on nasal corticosteroids and nasal wash with physiological serum.

Case 2:

The patient was 42 years old, presenting also a Samter syndrome with an asthma since 1999 on treatment. He consulted in our department for bilateral permanent nasal obstruction, associated anosmia and clear anterior rhinorrhea with no facial pain or epistaxis and without any other ENT or extra-ENT sign, endoscopic surgery was proposed at first for recurrence and persistent symptoms, but the patient refused. Then, he was lost to follow-up and started oral corticosteroids as self-medication. 13 years later the patient showed up for a worsening and of symptoms, including an enlargement of the nasal pyramid. Clinical examination found smooth, translucent yellow grape-like polyps extending into the nasal vesibula neurological, ophthalmological and oral cavity examinations are normal, not associated with palpable adenopathy.

CT scan showed also a bilateral and symmetrical filling of the ethomidal cells and nasal cavity with reactive filling of the other facial sinuses and deformation of the proper nasal bones (figure 3).

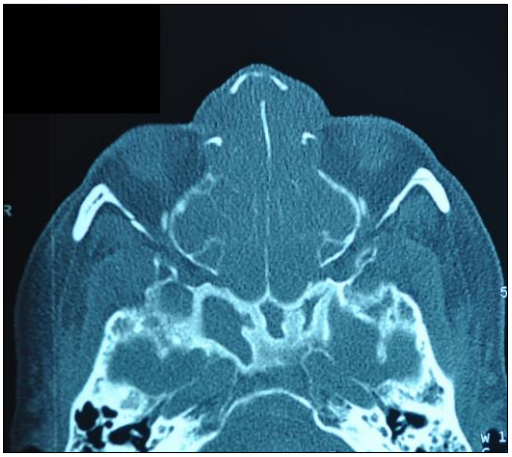

Figure 3: Axial computed tomographic scan of the patient showing nasal polyps with enlargement of the nasal bone of the second patient

The patient underwent the same surgical technique as well, surgical follow-ups were similar, with significant improvement of the nasal pyramid deformity (figure 4).

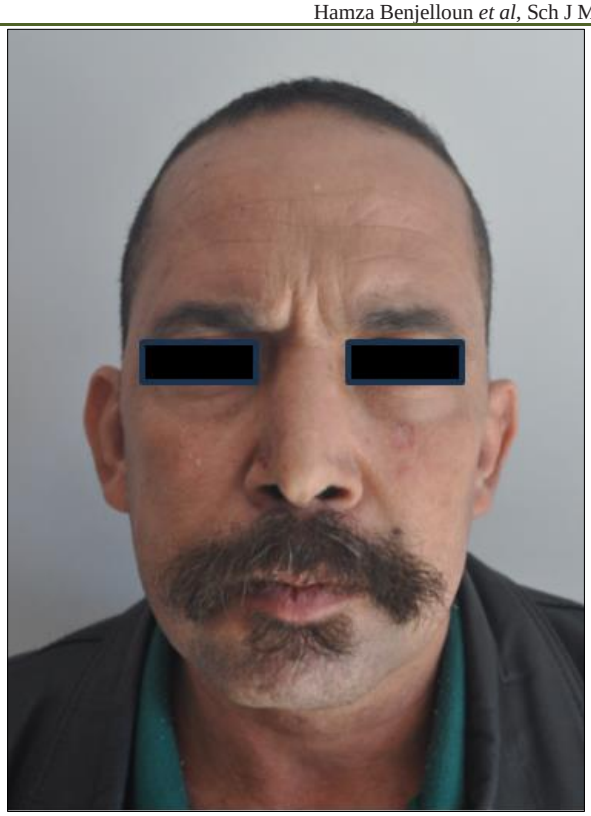

Figure 4: Postoperative picture of the patient showing the aesthetic Outcome of the 2nd case

Case 3

A 35-year-old female patient, with Samter syndrome as well, presented with progressive nasal obstruction and anosmia for over a decade. She had previously undergone medical treatment with nasal corticosteroids and antihistamines but reported worsening symptoms over the last five years.

Clinical examination revealed large, bilateral, grape-like polyps obstructing the nasal passages, along with nasal pyramid deformation.

CT scans confirmed extensive ethmoidal sinus involvement, with complete nasal cavity obstruction and pronounced deformation of the nasal bones (figure 5). Given the severity of the condition, an endoscopic surgical approach was performed, including total polypectomy, bilateral ethmoidectomy, and frontal sinus drainage. Postoperatively, the patient was prescribed a long-term regimen of nasal corticosteroids and regular saline irrigation. Her nasal breathing and nasal pyramid deformity were significantly improved over six months.

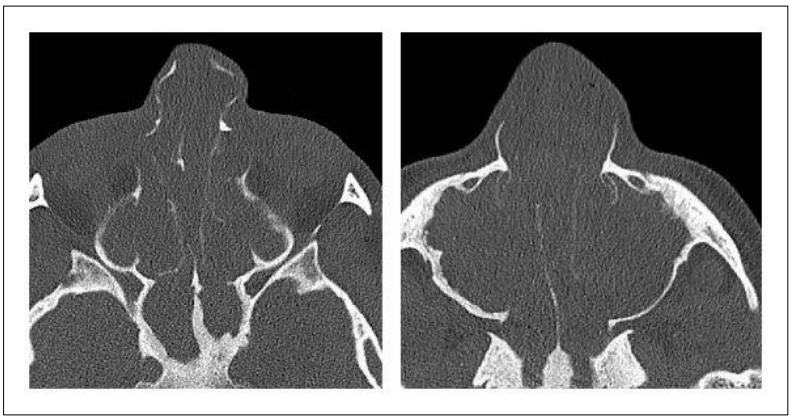

Figure 5: Axial computed tomographic scan of the patient showing nasal polyps with enlargement of the nasal bone of our third case report

DISCUSSIONS

Woakes syndrome is a rare and severe form of chronic rhinosinusitis with nasal polyposis that leads to progressive nasal pyramid deformity due to persistent inflammation and the mechanical pressure exerted by the polyps. This entity was first described by Woakes in 1885 as necrotizing ethmoid sinusitis with mucinous

polyps, and subsequent authors have further refined its clinical features, linking it to early-onset, aggressive, and treatment-resistant nasal polyposis [3-5]. Our three reported cases exhibit key characteristics of Woakes syndrome, including prolonged disease duration (over a decade in each case), progressive worsening of nasal obstruction, and significant nasal bone deformation confirmed on imaging, all of which align with previously described cases [5, 6]. Additionally, all three patients had Samter's triad, a strong association between aspirin intolerance, bronchial asthma, and nasal polyposis, which was first recognized by Widal in 1922 and later formalized by Samter in 1968 [4]. The presence of this triad suggests a heightened inflammatory response that may contribute to disease severity and frequent recurrences. Age at diagnosis in our cases ranged from 35 to 42 years, which is consistent with reports indicating that Woakes syndrome predominantly affects young adults, particularly due to the plasticity of facial bones that allows for progressive deformation over time [7]. In our cases, the duration of symptoms, ranging from 9 to 13 years, further supports the notion that untreated or inadequately controlled inflammation plays a critical role in the pathophysiology of bone remodeling and nasal pyramid enlargement [7-9]. Radiological findings were consistent across all patients, demonstrating bilateral ethmoidal sinus opacification, complete nasal cavity obstruction, and bony hypertrophy, confirming the characteristic imaging features of Woakes syndrome described in previous literature [5]. Regarding management, our patients underwent functional endoscopic sinus surgery (FESS) combined with external nasal surgery, which is in accordance with current recommendations for both functional and aesthetic restoration [9]. The primary goal of surgery in such cases is to evacuate obstructive polyps, restore sinus ventilation, and address nasal deformity when necessary. Rhinoplasty was performed in all three cases to correct the nasal pyramid deformation, a step that has been advocated in previous reports where severe bony involvement is present [9]. Alternative techniques, such as external bidigital compression without osteotomy, have been proposed to correct nasal deformities post-surgery, as highlighted by Schoenenberger and Tasman, though this approach was not employed in our cases [7]. Postoperative management remains crucial to prevent recurrence, with all patients placed on a long-term regimen of nasal corticosteroids and saline irrigation, a therapeutic approach that has been shown to significantly reduce recurrence rates and improve patient-reported outcomes [10]. Assessment using the Moroccan adaptation of the SNOT-22 questionnaire confirmed a marked improvement in the quality of life postoperatively, further reinforcing its role as a valuable tool for monitoring treatment efficacy [11]. Overall, our findings underscore the importance of a multidisciplinary approach in managing Woakes syndrome, integrating early medical intervention, precise surgical correction, and structured long-term follow-up to optimize outcomes and minimize disease recurrence.

CONCLUSION

Woakes syndrome is a rare but serious condition characterized by recurrent nasal polyposis and nasal pyramid deformity. Early diagnosis, combined with comprehensive treatment including functional endoscopic sinus surgery and nasal bone correction, is essential for managing both functional and aesthetic outcomes. Postoperative maintenance with nasal corticosteroids and saline irrigation helps prevent recurrence. Our findings emphasize the importance of a multidisciplinary approach to optimize long-term patient outcomes, with further studies needed to refine treatment strategies.

Ethical Statement:

Compliance with Ethical Standards: The study was conducted in compliance with ethical standards.

Funding: This research received no external funding.

Conflict of Interest: There are no conflicts of interest to declare related to this research.

Ethical Approval:

While formal ethical approval was not obtained for this study, we ensured that all aspects of the research were conducted ethically and with respect for the rights and well-being of the participants.

Informed Consent:

Informed consent was obtained from all participants involved in the study, and this information has been appropriately included in the manuscript.

REFERENCES

1. Caversaccio M, Baumann A, Helbling A. Woakes' syndrome and albinism. Auris Nasus Larynx. 2007;34(2):245-8. DOI: 10.1016/j.anl.2006.09.030.
2. Hargrove SW. Discussion on the treatment of nasal polypi. Proc R Soc Med. 1954;47(12):1015-21.
3. Woakes E. Necrosing ethmoditis and mucous polyps. Lancet. 1885;61:619-20.
4. Picado C. Aspirin intolerance and nasal polyposis. Curr Allergy Asthma Rep. 2002;2(6):488-93. DOI: 10.1007/s11882-002-0089-8.
5. Appaix S, Robert J. Polypose déformante et récidivante des jeunes (maladie de Woakes). Revue de Laryngologie. 1953:74:216-54.
6. Kellerhals B, de Uthemann B. Woakes' syndrome: the problems of infantile nasal polyps. Int J Pediatr Otorhinolaryngol. 1979;1(1):79-85.
7. Schoenenberger U, Tasman AJ. Adult-onset woakes' syndrome: Report of a rare case. Case Rep Otolaryngol 2015;2015:1–4.
8. Caversaccio M, Baumann A, Helbling A. Woakes' syndrome and albinism. Auris Nasus Larynx 2007;34:245–8.
9. Ueda M, Hashikawa K, Iwayama T, *et al.*, Rhinoplasty via the midface degloving approach for

nasal deformity due to nasal polyps: A case report of Woakes' syndrome.

10. Oral and Maxillofacial Surgery Cases 2017;3:64–9. 6 A lanazy F, Dousary SA, Albosaily A, *et al.*, Psychometric arabic sino-nasal outcome test-22: Validation and translation in chronic rhinosinusitis patients. Ann Saudi Med 2018;38:502–7.
11. A douly T, Adnane C, Khallouk A, *et al.*, Moroccan adaptation and validation of the rhinosinusitis quality-of-life survey. Eur Arch Otorhinolaryngol 2017;274:1507–13.