Journal of Advanced Research in Medicine
Volume 11, Issue 3 - 2024, Pg. No. 1-3
Peer Reviewed & Open Access Journal

Case Report

Sphingomonas paucimobilis Infection:A Rare Cause of Laryngeal Pyocele

Shaila Sidam[1], Anjan K Sahoo[2], Jibin Joshi[3]

[1,2]Associate Professor, [3]Senior Resident, Department of Otorhinolaryngology, AIIMS Bhopal, India.
DOI: https://doi.org/10.24321/2349.7181.202407

I N F O

Corresponding Author:
Shaila Sidam, Department of Otorhinolaryngology, AIIMS Bhopal, India.
E-mail Id:
shailasidam74@gmail.com
Orcid Id:
https://orcid.org/0000-0001-9946-8292
How to cite this article:
Sidam S, Sahoo A K, Joshi J. Sphingomonas paucimobilis Infection:A Rare Cause of Laryngeal Pyocele. J Adv Res Med 2024; 11(3): 1-3.

Date of Submission: 2024-04-22
Date of Acceptance: 2024-05-20

A B S T R A C T

Laryngeal cyst are uncommon cause of laryngeal swelling. They can be congenital or acquired which is more common. It can get secondarily infected and can cause airway comprise. Hence they should be timely managed so as to relief the airway.

Keywords: Laryngeal Cyst, Pyocele, Stridor

Introduction

Sphingomonas paucimobilis bacteria is a very rare organism to encounter in the field of otorhinolaryngology and head and neck surgery. It is a gram-negative bacilli with low pathogenic potential which can be found in soil and water sources.[1] This bacillus usually infects immunocompromised patients like patients with HIV and diabetes mellitus. Contaminated solutions, such as distilled water, haemodialyser fluid, and sterile drug solutions, can lead to infections by Sphingomonas paucimobilis in the form of bacteraemia and sepsis.Even though rare, this organism usually causes infections like meningitis, septic arthritis, osteomyelitis and very rarely abscesses like retropharyngeal abscess.

Here we discuss an extremely rare case of laryngeal pyocele in combination with laryngeal cyst caused by Sphingomonas paucimobilis bacteria.

Case Report

A 32-year-old gentleman presented to our emergency department with complaints of progressive change in voice for the last one month and noisy breathing for the past 15 days. There was no history of any neck swelling, difficulty in swallowing or addictions. The patient had a similar episode of symptoms 6 months back for which he underwent some laryngeal procedure from the local hospital and he improved symptomatically following that. Details of the procedure were not available.

On general examination, the patient had stridor and he was maintaining saturation in room air. The results of examinations ofthe oral cavity, oropharynx and neck were within normal limits. The patient was stabilised initially by emergency tracheostomy under local anaesthesia. On further evaluation, laryngeal endoscopy revealed a mucosa-covered bulge at the level of the left aryepiglottic fold and left false vocal cord completely obstructing the glottic chink (Figure 1). Radiological investigations like computerised tomography and magnetic resonance imaging of the neck were performed.

CT scan revealed a relatively defined smooth peripherally enhancing cystic lesion with central hypodensity in the left hemilarynx measuring 3.1 x 3.4 x 4.5 cm. MRI also showed

the same features which were suggestive of a laryngeal cyst (Figures 2 and 3). The patient underwent microlaryngeal surgery with marsupialisation of the cyst and drainage of the pyocele. Around 10 Lof pus was drained (Figure 4). The sample was sent for gram stain, bacterial culture, fluid cytology and AFB staining. Cyst fluid cytology was suggestive of a benign cystic lesion. All tests for tuberculosis came out to be negative.

Pus culture and sensitivity revealed the growth of Sphingomonas paucimobilis bacteria which was sensitive to ciprofloxacin, ceftriaxone, cefepime, cotrimoxazole, gentamicin,piperacillin, and tazobactam. The patient was started on an intravenous piperacillin-tazobactam combination of 4.5 g 8 hourly and continued for 14 days. The patient improved clinically and haemodynamically with WBC counts falling from 17000/microL to 13000/microL. On a 2-week follow-up, laryngeal examination showed significant improvement in the form of reduction in the bulge and vocal cords became visible (Figure 5).

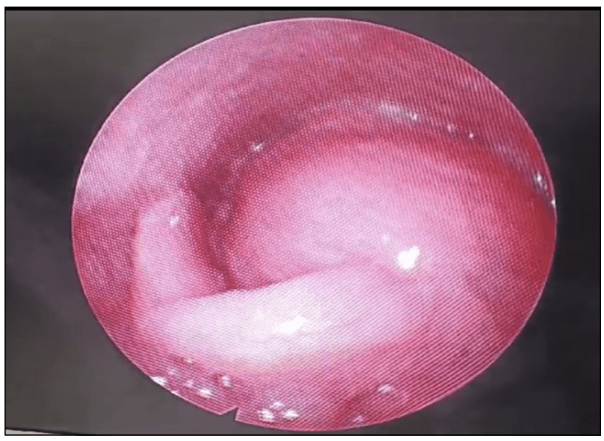

Figure 1.Depicts the laryngoscopic view of the pyocoele

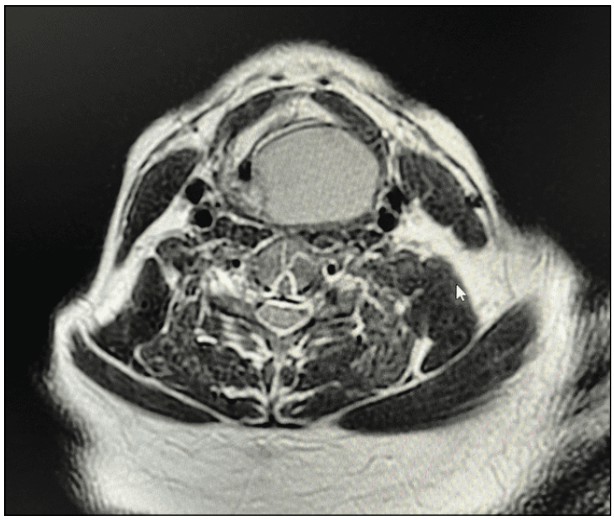

Figure 2.Computed Tomographic axial images of the neck showing the pyocoele

Figure 3.Saggital Computed Tomographic images of the neck pyocoele

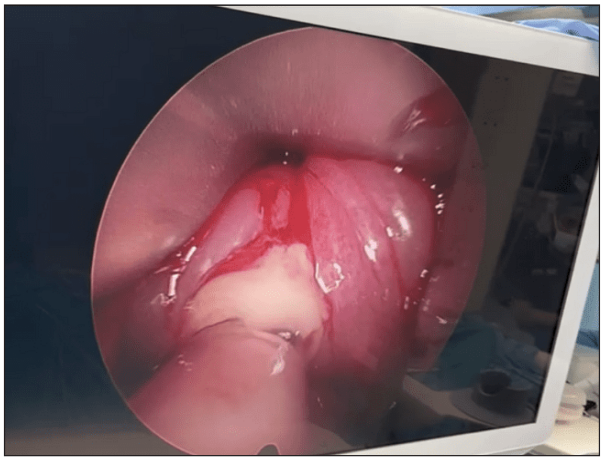

Figure 4.Depicts the pus being drained from the pyocoele

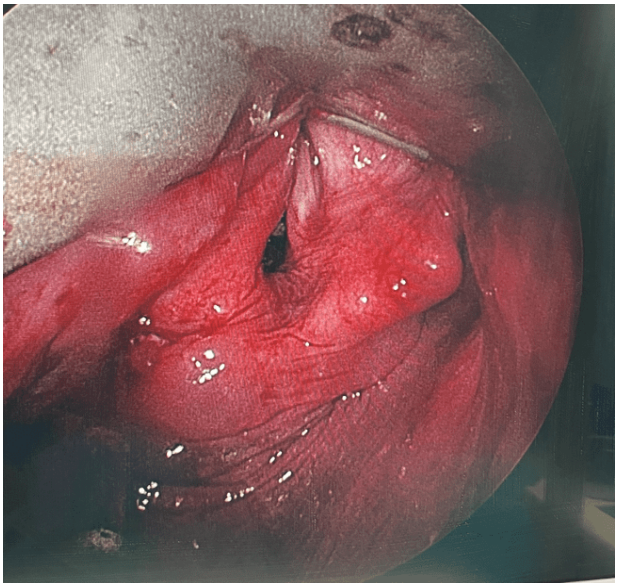

Figure 5.Post operative picture after the drainage of the pus

ISSN: 2349-7181
DOI: https://doi.org/10.24321/2349.7181.202407

Discussion

A laryngeal cyst or saccular cyst is a mucus-filled cyst arising from the saccule of the larynx. This may get infected to form laryngeal pyocele with pus collection. Laryngeal cysts are uncommon benign lesions that can burden people of any age. They are either acquired or congenital. Congenital cysts of the larynx are an uncommon cause of airway compromise in newborns.[4] Acquired cysts are more commonly seen in adults. Here we had an adult patient with acquired infected laryngeal cyst with an extremely rare organism.

Sphingomonas paucimobilis, previously known as Pseudomonas paucimobilis, is a gram-negative bacillus with low pathogenic potential which can be found in soil and water sources. This bacillus usually infects the immunocompromised states like patients with HIV and diabetes mellitus. This organism responds very well to the antibiotics. In our case also, the organism was sensitive to a large number of antibiotics on sensitivity testing.

Timely management of the obstructed airway and treatment of the root cause of the disease helped us in the management of this case.

Conclusion

Inadequate removal and marsupialisation of laryngeal pyocele can result in recurrence and rare causes like Sphingomonas paucimobilis infection should be considered in such cases. Timely management of the obstructed airway and treatment of the root cause of the disease is the best way to tackle such situations.

Conflict of Interest: None

References

1. Ionescu MI, Neagoe DȘ, Crăciun AM, Moldovan OT. The gram-negative bacilli isolatedfrom caves-Sphingomonas paucimobilis and Hafnia alvei and a review of their involvement in human infections. Int J Environ Res Public Health. 2022;19(4):2324. [Google Scholar]
2. Ryan MP, Adley CC. Sphingomonas paucimobilis: a persistent gram-negative nosocomial infectious organism. J Hosp Infect. 2010 Jul;75(3):153-7. [PubMed] [Google Scholar]
3. Tito E, Ahmad A, Gongolli J, Issack W, Johnson A. Sphingomonas paucimobilis bacteremia in a patient with retropharyngeal abscess. Cureus. 2022 May;14(5):e25407.[PubMed] [Google Scholar]
4. Zamfir-Chiru-Anton A, Gheorghe DC. Saccular cyst with atypical presentation. J Med Life. 2016;9(2):199-204. [PubMed] [Google Scholar]

ISSN: 2349-7181
DOI: https://doi.org/10.24321/2349.7181.202407