

Content available at: <https://www.ipinnovative.com/open-access-journals>

## Journal of Oral Medicine, Oral Surgery, Oral Pathology and Oral Radiology

Journal homepage: <http://www.joooo.org>

## Case Report

## A case report on acute suppurative parotitis

Sahla Batool<sup>1\*</sup>, Juhi Gupta<sup>1</sup>, Masood Hasan Khan<sup>2</sup>, Sidra Aslam<sup>1</sup><sup>1</sup>Dept. of Oral Medicine and Radiology, Dr. Ziauddin Ahmad Dental College and Hospital, AMU, Aligarh, Uttar Pradesh, India<sup>2</sup>Dept. of Oral and Maxillofacial Pathology & Microbiology, Dr. Ziauddin Ahmad Dental College and Hospital, AMU, Aligarh, Uttar Pradesh, India

## Abstract

Acute suppurative parotitis (ASP) is an uncommon but potentially serious bacterial infection of the parotid gland, characterized by rapid onset of pain, swelling, and purulent discharge from the Stenson's duct. It is most frequently caused by *Staphylococcus aureus*, though other bacteria, such as streptococci or anaerobes, may be involved. Risk factors include dehydration, poor oral hygiene, and conditions reducing salivary flow, such as medications with anticholinergic effects or systemic illnesses. Historically, ASP had high mortality rates before antibiotics, but modern management with antibiotics and supportive care has significantly improved outcomes. Prompt diagnosis and treatment are critical to prevent complications like abscess formation or sepsis. This case report describes the presentation, diagnosis, and management of ASP in a 55-year-old male, offering insights for clinical practice.

**Keywords:** Acute suppurative parotitis, Parotid gland, *Staphylococcus aureus*.**Received:** 04-07-2025; **Accepted:** 15-09-2025; **Available Online:** 29-09-2025

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [reprint@ipinnovative.com](mailto:reprint@ipinnovative.com)

## 1. Introduction

Acute suppurative parotitis (ASP) is an uncommon bacterial infection of the parotid gland, historically associated with post-operative complications, particularly following abdominal surgery.<sup>1</sup> Its incidence has significantly declined due to routine perioperative antibiotic use. ASP predominantly affects older adults, neonates and individuals with predisposing conditions such as dehydration, immunosuppression, poor oral hygiene, or underlying diseases like diabetes mellitus or Sjögren's syndrome.<sup>2</sup> The clinical presentation includes acute, painful swelling of the parotid gland, often accompanied by fever and purulent discharge from Stensen's duct. The primary causative organism is *Staphylococcus aureus*, though *Streptococcus* species, gram-negative bacteria, and anaerobes may also be involved, particularly in hospitalized patients.<sup>3,4</sup> The pathogenesis involves ascending bacterial colonization through the ductal system, exacerbated by reduced salivary flow.

Prompt diagnosis, based on clinical signs and confirmed by pus expression from the duct, is critical for initiating appropriate antibiotic therapy to prevent complications like abscess formation or sepsis. This case report describes a 55-year-old male patient presenting with classic ASP symptoms: mild pain, swelling, and pus discharge from the right parotid duct. Uniquely, pus culture isolated *Enterococcus faecalis*, an exceedingly rare pathogen in ASP, with literature revealing very few reports of its involvement.<sup>5</sup> The patient was successfully treated with antibiotics tailored to culture sensitivity results, underscoring the critical role of microbiological analysis in guiding effective treatment for atypical ASP presentations.

## 2. Case Report

A 55-year-old male patient reported to the department OPD with a chief complaint of swelling and discomfort in the right

\*Corresponding author: Sahla Batool  
Email: [sahlabatool98@gmail.com](mailto:sahlabatool98@gmail.com)

side of cheek region for 20 days which was progressive and associated with pain, and mild fever. On several mornings, he had noted discharge of purulent fluid from the right buccal mucosa which was creamish white to yellowish in colour but not every morning. Following which the facial swelling partially subsided for a few hours before re-accumulating. Patient had no history of any prior salivary gland infection, sialolithiasis, or systemic illness such as tuberculosis or Diabetes Mellitus. He took no regular medication and denies any drug allergies. (**Figure 1**)

Extraoral examination showed solitary, diffuse, oval shaped, slightly erythematous swelling on right side of cheek region. It was mobile, diffuse, soft in consistency, tender with local rise in temperature. (**Figure 2**)

Intraorally, slight erythema and induration was evident at the opening of parotid duct (Stenson's duct) on palpation/milking of the gland scant yellowish white purulent discharge was seen which was sent for culture and sensitivity. (**Figure 3**) In culture organism isolated was *Enterococcus faecalis* which was sensitive to clindamycin, vancomycin, doxycycline, ampicillin, high content gentamycin, and high content streptomycin and resistant to levofloxacin and penicillin. Based on results of culture and sensitivity, patient received adult dosage of clindamycin (350mg twice daily) and doxycycline (100mg twice daily) for 10 days.

### 2.1. Investigations

Blood investigations like CBC, HbA1c were done and the findings were within the normal limits.

In radiographic investigation USG was done which showed minimal to no vascularity in the right parotid gland and a channel communicating with the superficial facial vein. These findings raised the possibility of an arteriovenous (AV) malformation or lymphatic malformation or less likely, a localized inflammatory etiology.

### 2.2. Differential diagnosis

1. Acute suppurative parotitis
2. Chronic sialadenitis
3. Sialolithiasis
4. Tuberculous parotitis
5. Actinomycosis
6. Neoplasm

### 2.3. Outcome and follow-up

After 1 week patient showed marked improvement in relation to the symptoms of pain and swelling, however purulent discharge on palpation was still seen. Patient was advised to continue the antibiotic regimen, hydration, oral and hand hygiene maintenance. Repeat USG with colour doppler was advised.

A follow-up Color Doppler study conducted one week later showed mild heterogeneity of the right parotid gland

with normal glandular bulk and vascularity, and no evidence of cystic spaces or vascular anomalies.

After 14 days of antibiotic coverage, there was complete resolution of symptoms with clear serous discharge seen on palpation/milking of the right parotid gland. (**Figure 4**)



**Figure 1:** Front profile of the patient



**Figure 2:** Right lateral profile of the patient showing swelling marked in circle



**Figure 3:** Purulent discharge seen from right parotid duct on milking of the right parotid gland



**Figure 4:** No discharge seen after 14 days of antibiotic coverage

### 3. Discussion

Acute suppurative parotitis (ASP) is a relatively uncommon inflammatory condition of the parotid gland, traditionally associated with elderly, debilitated, or immunocompromised patients. Historically, it has been described as a complication of long-term debility and oral sepsis. However, recent studies, such as one from Singapore, have noted an increased incidence in younger, otherwise healthy individuals, with unclear etiology, potentially linked to chronic oral dehydration due to climate.<sup>5</sup> In our case 55-year-old male, aligns well with a more contemporary understanding of ASP epidemiology, as a large post-millennial study in Denmark reported a median age of 53 years for acute salivary gland infection patients.<sup>4</sup> This suggests that ASP is not exclusively confined to the neonates, very old or severely debilitated, emphasizing the need for a broad clinical suspicion.

The pathogenesis of ASP often involves retrograde bacterial contamination from the oral cavity, especially when salivary flow is reduced due to factors like dehydration, malnutrition, or certain medications. Obstruction of salivary ducts by stones or strictures can also predispose to infection.<sup>6</sup> In our patient's case poor oral hygiene and decreased salivary flow can be considered as contributing factor.

One of the most striking aspects of this case is the isolation of *Enterococcus faecalis* as the causative organism. While *Staphylococcus aureus* is overwhelmingly cited as the most common pathogen in ASP, accounting for 50-90% of positive cultures, other bacteria, including streptococci, gram-negative bacilli, and anaerobes, have also been implicated. The recent Danish study on acute salivary gland infections provides direct evidence for *Enterococcus spp.* in parotid gland abscesses, with 4 out of 23 parotid abscess cultures (17%) yielding "other species" which included enterococci.<sup>4</sup> This finding underscores the polymicrobial nature of these infections and highlights that uncommon but significant pathogens can be involved, necessitating comprehensive microbiological investigation.

The successful management of our patient with antibiotics sensitive to *Enterococcus faecalis*, as guided by culture and sensitivity testing, aligns with current best practices.<sup>7</sup> While acute suppurative parotitis often requires drainage in addition to antibiotic therapy, the critical role of identifying the specific pathogen and its antimicrobial susceptibility cannot be overstated. Many patients receive broad-spectrum antibiotics prior to admission, which can lead to low positive culture rates. Therefore, obtaining a definitive culture result in our case was highly valuable, allowing for targeted and effective antimicrobial therapy. Historically, radical surgical drainage techniques were advocated, but with modern imaging and effective antibiotics, less radical procedures, often combined with appropriate antimicrobial agents, are now effective.<sup>8</sup> The resolution of symptoms in our patient through targeted antibiotic treatment exemplifies the efficacy of this precise approach.

### 4. Conclusion

This case report provides a valuable contribution to the literature on ASP, particularly concerning its microbiological spectrum. It serves as an important reminder that despite *S. aureus* being the predominant pathogen, a diverse range of organisms, including *Enterococcus faecalis*, can cause severe parotid infections. This emphasizes the paramount importance of obtaining cultures and sensitivity results to guide specific antibiotic therapy and achieve favourable outcomes, even in cases presenting atypically or with less common causative agents.

### 5. Source of Funding

None.

### 6. Conflict of Interest

None.

### References

1. Belczak SQ, Cleva RDE, Utiyama EM, Cecconello I, Rasslan S, Parreira JG. Acute postsurgical suppurative parotitis: current prevalence at Hospital das Clínicas, São Paulo University Medical School. *Rev Inst Med Trop Sao Paulo*. 2008;50(5):303–5. <https://doi.org/10.1590/s0036-46652008000500010>.
2. Lampropoulos P, Rizos S, Marinis A. Acute suppurative parotitis: a dreadful complication in elderly surgical patients. *Surg Infect (Larchmt)*. 2012;13(4):266–9. <https://doi.org/10.1089/sur.2011.015>.
3. Bradley PJ. Microbiology and management of sialadenitis. *Curr Infect Dis Rep*. 2002;4(3):217–24. <https://doi.org/10.1007/s11908-002-0082-3>.
4. Danstrup CS, Münch HJ, Klug TE, Fursted K, Ovesen T. Clinical presentation and microbiology of acute salivary gland infections. *Dan Med J*. 2020;67(6):A11190659.
5. R Ganesh, T Leese. Parotid abscess in Singapore. *Singapore Med J*. 2005;46(10):553–6.
6. Damjanov I, Morović A. *Pathology Secrets*. 3rd ed. Philadelphia: Mosby Elsevier; 2009.
7. Mayer M, Esser J, Walker SV, Shabli S, Lechner A, Canis M, et al. Bi-institutional analysis of microbiological spectrum and

therapeutic management of parotid abscesses. *Head Face Med.* 2024;20(1):38. <https://doi.org/10.1186/s13005-024-00438-w>.

8. Saibene AM, Allevi F, Ayad T, Lechien JR, Mayo-Yáñez M, Piersiala K, et al. Treatment for parotid abscess: a systematic review. *Acta Otorhinolaryngol Ital.* 2022;42(2):106–15. <https://doi.org/10.14639/0392-100X-N1837>.

**Cite this article:** Batool S, Gupta J, Khan MH, Aslam S. A case report on acute suppurative parotitis. *J Oral Med Oral Surg Oral Pathol Oral Radiol.* 2025;11(3):116–119.