

CASE REPORTS**NEONATAL SUBMANDIBULAR SIALADENITIS IN THE ABSENCE OF TRADITIONAL RISK FACTORS: A CASE REPORT**

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ABSTRACT

Background: Neonatal suppurative sialadenitis is a rare diagnosis. The parotid gland is the most commonly involved gland and involvement of the submandibular gland is very rare.

Case: A 10-day-old male neonate presented with fever and reduced oral intake. He was a term infant, exclusively breastfed, and had no perinatal complications. On examination, a firm, erythematous swelling was noted in the left submandibular region. Investigations revealed submandibular sialadenitis with cellulitis and *Staphylococcus aureus* infection. Initial antibiotic therapy showed limited improvement, necessitating incision and drainage, which yielded purulent material. The baby recovered well with continued antibiotics and was discharged. At follow-up, the swelling resolved with no recurrence at 3 months post-discharge.

Conclusion: All submandibular swellings, even in the neonatal period, should be worked up for sialadenitis so that early diagnosis and treatment can be initiated. With early intervention the need for surgical intervention can be reduced significantly and the complication rate can be minimized.

Introduction

Suppurative sialadenitis is an infection of the salivary glands and is rare in the neonatal period. In newborns, it most commonly involves the parotid gland, while isolated submandibular involvement is exceedingly uncommon. The prevalence of neonatal suppurative sialadenitis is approximately 3.8 per 10,000 admissions, with isolated submandibular involvement occurring in fewer than 1 per 10,000 admissions.¹

The most commonly associated risk factors are prematurity, dehydration, prolonged orogastric or nasogastric tube feeding, and prolonged intubation. Maternal infections, mastitis, and immunocompromised states have also been implicated.^{1,2,3,4}

We describe a 10-day-old neonate with isolated acute suppurative sialadenitis of the submandibular gland.

Clinical Description

A 10-day-old male newborn presented with reduced oral acceptance and fever for 3 days. He was born at 38 weeks by normal vaginal delivery, with an unremarkable perinatal period, and was exclusively breastfed. At admission, the baby weighed 2918 g and had hyperthermia. A unilateral 3 × 3 cm firm swelling was present in the left submandibular region, with local warmth and slight erythema but no fluctuation. (Figure 1)

Investigations showed positive qualitative CRP. Ultrasonography revealed heterogeneous echotexture

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ARTICLE HISTORY

Received 24 August 2026

Accepted 13 October 2026

KEYWORDS

Submandibular sialadenitis,
Neonatal sialadenitis,
Staph. aureus.

of the left submandibular gland with adjacent inflammatory changes suggestive of sialadenitis with cellulitis and enlarged upper cervical lymph nodes. (Figure 2) Blood culture was sterile, while swab culture from the submandibular gland duct grew *Staphylococcus aureus*.

Management and Outcome:

Despite antibiotics, the swelling progressively increased and became fluctuant on day 9 of admission. Repeat ultrasonography showed a 4–5 cc collection, with the gland not separately visualized and multiple bilateral reactive cervical lymph nodes. On day 11, incision and drainage was performed under sedation using standard aseptic precautions, yielding 10–12 mL of purulent material. Pus culture grew methicillin-sensitive *Staphylococcus aureus* (MSSA), sensitive to cefotaxime, vancomycin, and linezolid.

Lumbar puncture was deferred as the infant remained hemodynamically stable without clinical features suggestive of meningitis and had a localized infective focus on ultrasonography. Intravenous antibiotics were continued for 21 days, considering the extensive cellulitis, abscess formation requiring drainage, and delayed clinical resolution.

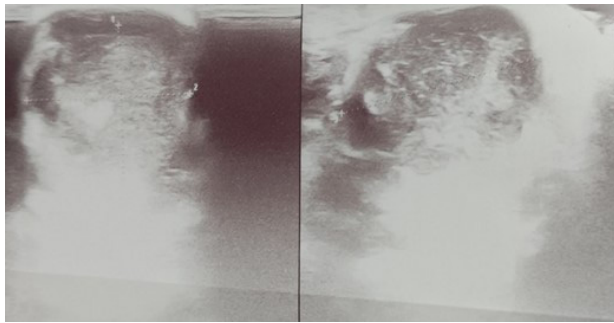
The infant was discharged on oral linezolid for 14 additional days. At discharge, the swelling had markedly reduced with good wound healing, and the infant was feeding well. CRP had normalized and the hemogram was within normal limits. At 7-day follow-up, only a 0.5 × 0.5 cm residual nodular swelling remained; it had completely resolved by 14 days. There was no recurrence or fresh complaint at 3-month follow-up.



Figure 1: Clinical photograph at presentation showing erythematous swelling over the left submandibular region consistent with acute submandibular sialadenitis.



Figure 2: Ultrasonography of the left submandibular region demonstrating a heterogeneous collection within the enlarged submandibular gland suggestive of abscess formation.



Discussion:

Acute suppurative sialadenitis involving the submandibular gland in neonates is uncommon. The first three cases of isolated neonatal submandibular infection were reported by Wells in 1975.³ Submandibular involvement is rarer than parotid involvement, possibly because its mucus-rich, bacteriostatic secretions provide greater protection against infection.⁵ We report an isolated unilateral case in a full-term male neonate presenting with reduced feeding and left submandibular swelling.

Predisposing factors include dehydration, prematurity, prolonged tube feeding, intubation, maternal mastitis, and immunocompromised states.^{3,5,7} Dehydration may cause salivary stasis. Prematurity is reported in 30–40% of cases,^{4,6} but our patient was full-term. Sialolithiasis is rare in neonates and was not seen on ultrasonography in our patient. Common causative organisms include *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, and *Moraxella catarrhalis*.⁶

Culture and sensitivity are important for identifying the causative organism and guiding antimicrobial therapy. Most cases respond to antibiotics; however, persistent or progressive swelling with fluctuation may indicate abscess formation requiring incision and drainage. Incision and drainage is rarely required but has been reported in cases complicated by abscess formation.^{8,9}

Vancomycin was initiated empirically because of extensive neck cellulitis and concern for severe staphylococcal infection, including MRSA. Ductal and pus cultures subsequently confirmed MSSA. Despite this, antimicrobial therapy was continued because of extensive cellulitis, progressive abscess formation, and delayed clinical resolution.

Our patient lacked commonly reported risk factors including prematurity, dehydration, prolonged tube feeding, maternal infection, and sialolithiasis. Suboptimal breastfeeding hygiene was noted, although a causal relationship cannot be established. The prolonged antimicrobial therapy was influenced by extensive local infection, abscess formation requiring drainage, and delayed clinical resolution.

Conclusion

Early diagnosis, prompt antimicrobial therapy, and attention to potentially modifiable risk factors such as breastfeeding and caregiver hygiene practices may reduce complications and the need for surgical intervention.

Lessons learnt

1. *Staphylococcus aureus* remains the most common causative organism of neonatal suppurative sialadenitis.
2. Although uncommon, neonatal submandibular swelling should prompt evaluation for suppurative sialadenitis.
3. Delayed presentation and progression to abscess formation may necessitate surgical drainage in addition to antimicrobial therapy.
4. Assessment of breastfeeding and caregiver hygiene practices should form an important part of the evaluation of neonatal suppurative sialadenitis, particularly when traditional risk factors are absent.

Compliance with Ethical Standards

Funding: None

Conflict of Interest: None

References:

1. Pathak M, Yadav L, Bansal LK. Suppurative submandibular sialadenitis in a term neonate: is there any alternative to incision and drainage? *Int J Pediatr Otorhinolaryngol Extra*. 2013;8:69-70.
2. Davis TK, Pinheiro JM, Lepow M, Dangman B, Mouzakes J. Submandibular sialadenitis and lymphadenitis in neonates: epidemiology and relation of secular trends in the incidence of *Staphylococcus aureus* sepsis. *WebmedCentral Paediatrics*. 2011;2(4):WMC001873.
3. Wells DH. Suppuration of the submandibular salivary glands in the neonate. *Am J Dis Child*. 1975;129:628-30.
4. Francis CL, Larsen CG. Pediatric sialadenitis. *Otolaryngol Clin North Am*. 2014;47:763-78.
5. Leake D, Leake R. Neonatal suppurative parotitis. *Pediatrics*. 1970;46:202-7.
6. Chandak R, Degwekar S, Chandak M, Rawlani S. Acute submandibular sialadenitis—a case report. *Case Rep Dent*. 2012;6:15375.
7. Tapisiz A, Belet N, Ciftçi E, Fitöz S, Ince E, Doğru U. Neonatal suppurative submandibular sialadenitis. *Turk J Pediatr*. 2009;51:180-2.
8. Bafaqeeh SA. Complicated neonatal submandibular suppurative sialadenitis. *Int J Pediatr Otorhinolaryngol*. 1998;44:267-71.
9. Salaria M, Poddar B, Chawla K, Singh D. Suppurative submandibular sialadenitis in a neonate. *Indian Pediatr*. 2001;38:87-89.