

Case Report

A rare case of neonatal parotid abscess

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ABSTRACT

Acute suppurative parotitis is not common in children and is exceptionally uncommon in neonates. Most common microorganism isolated is *Staphylococcus aureus*. We present a 22-day old, full-term, breast-fed, male neonate with a left-sided parotid abscess. The infant displayed a preauricular swelling, pain and redness. Pus discharged from cleared out Stensen's channel on compression of the gland remotely. Early determination and intravenous anti-microbials are the keys to the treatment.

Keywords: Acute suppurative parotitis, Neonatal parotid, Parotid glands

INTRODUCTION

Salivary gland diseases are uncommon in neonates; they most commonly include the parotid glands. It is usually unilateral, and its prevalence is reported as 3.8-14/10 000 in early infancy.^{1,2} Only 44 cases have been detailed till now in the English literature within the past four decades.³ Seventy-seven percent of the neonates influenced with neonatal suppurative parotitis (NSP) are male, and only 23% of the neonates require surgical drainage. The most common microorganism isolated is *Staphylococcus aureus*. These microorganisms reach the parotid gland by means of the Stensen's duct and are less common hematogenous. Intravenous anti-microbial therapy is recommended for treatment, and surgical drainage is needed in only a few numbers of cases.⁴ We report a full-term breast-fed male neonate who presented with an acute neonatal parotid abscess.

CASE REPORT

A 22-day-old full-term, breast-fed, male neonate presented with a 4 days' history of irritability, fever, pus draining in mouth, poor sucking and left preauricular swelling. He was born at full-term by normal vaginal

delivery in an uneventful pregnancy, and his birth weight was 2500 g. On admission, the baby was irritable and dehydrated, and his weight was 1720 g and axillary temperature was 38.5°C.



Figure 1: Neonate with erythema and a hot and fluctuant swelling.

Examination revealed a toxic neonate with erythema and a hot and fluctuant swelling of the left parotid gland of size 5×5 cm. Pus exuded from the left Stensen's duct on

applying pressure on the external surface. Systemic examination was otherwise unremarkable. Aspiration of the swelling revealed thick pus. Pus culture and sensitivity report showed presence of Methicillin sensitive *Staphylococcus Aureus*.



Figure 2: On day 1, the patient presented with seizure.

Laboratory tests revealed hemoglobin 15.5 g/dl, white blood cells 23,910/cmm, Platelet count 0.71 lacs/cumm urea 86 mg/dl, sodium 168 mmol/dl, potassium 4.2 mmol/dl and chloride 125 mmol/dl.

Ultrasound of the parotid glands demonstrated an enlarged left parotid gland with hypoechoic areas with a few pockets of thick pus which is suggestive of acute suppurative parotitis.



Figure 3: Patients is having B/L corneal ulcer.

Rehydration of the baby was done with intravenous fluid and was started on intravenous meropenem (20 mg/kg/day) at the time of admission. The parotid abscess was surgically drained, and the patient showed improvement. The pus culture showed methicillin-sensitive *S. aureus*.

On Day-1, the patient presented with seizure for which iv Phenobarbital was given at (15 mg/kg Stat).

The patient is also having B/L corneal ulcer for which, eye drops atropine (1 drop HS) and eye drops Gatikind (1 drop 1 hrly) are given. The patient was treated for 14 days and has recovered completely. On follow up

examination, no residual abnormality of the gland is seen and he did not show chronic recurrent parotitis.

DISCUSSION

NSP is a rare disease. In infants, parotid glands are more commonly infected than sub-mandibular glands.^{5,6} Spiegel et al and Ismail et al reviewed the cases of patients with NSP during the past five decades, mostly from case reports.³

All the neonates with parotid gland swelling have varying degrees of erythema, warmth and tenderness. Insufficient breast-feeding is considered one of the risk factors for neonatal suppurative parotitis. Other risk factors include pre-maturity, nasogastric tube feeding, environmental hot weather, excessive oral suctioning, maternal breast abscess in a breast-fed infant.⁷

The most common microorganism causing NSP is *S. aureus* followed by Gram-positive, Gram-negative and rarely anaerobic organisms.¹ In NSP, parotid glands are most commonly infected by retrograde spread of the organisms from the oral cavity via the Stensen's duct and rarely hematogenous spread.⁵ Parotid gland infection may be initiated by dehydration leading to precipitation of the mucous or stone formation in the Stensen's duct.³

NSP commonly presents with fever, redness and swelling in the preauricular region. There may be bilateral infection. Purulent discharge from Stensen's duct is pathognomonic of this condition. Leukocytosis above $15 \times 10^9/l$ with neutrophilic predominance was found in 71% of the cases, and the erythrocyte sedimentation rate was elevated in only 20% of the patients.³ In our patient, leucocyte counts are elevated to 19,600/cmm with neutrophilic predominance. Laboratory findings are non-specific and not very helpful in the diagnosis of NSP. Ultrasonography of the parotid gland usually demonstrates enlarged parotid gland with oedema, increased vascularity and hypoechoic areas.⁵

NSP resolves with antibiotics in majority of cases. The empirical antibiotics used in NSP are a combination of anti-staphylococcal agent and an aminoglycoside, or a third-generation cephalosporin along with clindamycin or a similar medication to cover possible anaerobic infection, are good initial choices until the pus culture reports are available. After starting antibiotics, fever usually settles down within 24 h and the swelling decreases within 3–5 days. Surgical drainage is needed in only a few cases (23%) where there is a delay in seeking medical attention, or the organism is resistant to the empirical antibiotic therapy. Facial palsy, salivary fistula, mediastinitis resulting from pus tracking down the carotid sheath and rupture into the external auditory meatus are the complications of NSP, but these are uncommon due to the prompt initiation of antibiotic therapy.^{5,8}

CONCLUSION

We know acute suppurative parotitis is a rare disease and is uncommon in neonates. If neonates come with swelling of neck always keep high index of suspicion of NSP. It requires prompt and aggressive treatment.

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