

# Suppurative parotitis in a preterm infant

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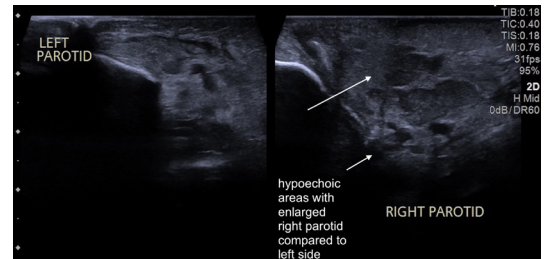
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## DESCRIPTION

A preterm female infant was born at 26 weeks' gestation by spontaneous vaginal delivery following a cephalic presentation. During her admission on the neonatal unit, she presented on day 68 with a swelling of the right cheek (**figure 1**). At the time, she was establishing feeds with expressed breast milk, through a combination of nasogastric tube and exclusive bottle feeds. There was a background of bronchopulmonary dysplasia, requiring nasal cannula oxygen. The swelling extended from the tragus of the right ear to mid-cheek and the inferior angle of the mandible. The area was slightly erythematous, warm, indurated and tender. There was no involvement of adjacent lymph nodes or the external auditory canal, which showed a normal tympanic membrane appearance and no discharge. Examination of the oral cavity revealed a yellow purulent discharge at the opening of the right Stensen's duct, when the parotid gland was massaged. A clinical diagnosis of acute suppurative parotitis was made. This was confirmed on ultrasound scan imaging of the parotid glands, which showed hypoechoic areas with heterogeneous echotexture and increased vascularity, indicating an acute inflammation (**figure 2**).

The infant received 10 days of intravenous flucloxacillin, gentamicin and metronidazole, along with analgesia in the first 2 days. This combination of antimicrobial therapy provides cover for potential staphylococcal species, Gram-negative organisms and anaerobic organisms. *Staphylococcus aureus* is one of the most common organisms implicated in late-onset neonatal sepsis and parotitis. There was no history of mastitis in the mother. The dosage regime administered was as per neonatal formulary, in accordance with the corrected age of



**Figure 2** Ultrasound scan image of parotid glands.

the infant. The maxillofacial team advised conservative treatment as no abscess was noted on imaging. The infant's C reactive protein peaked at 108 mg/L. There was no rise in serum amylase level. Blood culture showed no growth. The purulent discharge from Stensen's duct showed a heavy growth of coagulase-negative *Staphylococcus*, *Enterococcus* spp and viridans-type streptococci. There was clinical and biochemical resolution by 5 days. A repeat ultrasound scan undertaken 5 days after completing antibiotics revealed sequelae of previous parotitis. She was discharged home from the neonatal unit at 3 months of age.

Isolated suppurative sialadenitis in neonates is a rare entity. The parotid glands are more commonly affected due to the serous nature of their secretions. In contrast, the secretions of the submandibular and sublingual glands are more mucoid and bacteriostatic in nature.<sup>1</sup> Prematurity is a recognised risk factor for this condition, in view of the potential for dehydration, malnutrition, immunosuppression and tube feeds predisposing to salivary stasis. There is a higher incidence in male infants.<sup>2-4</sup> Some case reports describe healthy term infants



**Figure 1** The infant with swelling on the right side of the face.



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## Learning points

- ▶ Infants presenting with a facial swelling should have a thorough examination, including that of the oral cavity, draining lymph nodes and the ears. There should be a high index of suspicion for sialadenitis, as fever may be absent and inflammatory markers may be non-specific.
- ▶ Consider ultrasound imaging to help confirm diagnosis and exclude any abscess formation, but there should not be any delay in commencing intravenous antibiotics when clinical suspicion is high.
- ▶ Prognosis is usually good and recurrence rates are very low. Prompt management involving antimicrobial therapy (including cover for anaerobic organisms) is the mainstay of treatment.

also being affected. Infection is usually unilateral and thought to be retrograde through the salivary ducts following ascending infection from the oral cavity, although haematogenous seeding following bacteraemia has also been described.<sup>1,3</sup> Diagnosis is mainly clinical, supplemented by inflammatory markers. Extrusion of pus from Stensen's duct is pathognomonic of suppurative parotitis.<sup>1</sup> Fever and raised serum amylase levels are uncommon findings in this age group.<sup>1,3</sup> A number of microorganisms have been implicated, the most common being *S. aureus*. Imaging is important for confirming the diagnosis, directing management, and excluding complications or other structural issues. Prognosis is generally good and prompt treatment with appropriate antibiotic cover prevents abscess formation.<sup>4</sup> Recurrence rates are low and possible complications include osteomyelitis, salivary fistula, facial palsy, extension to the external auditory canal, mediastinitis and subsequent respiratory distress.<sup>1,4</sup>

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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