Case Report

An unusual organism as a cause of Neonatal Suppurative Parotitis

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ABSTRACT

Neonatal suppurative parotitis(NSP) is an uncommon illness in the neonate. Here, to the best of our knowledge we describe first case of newborn who developed NSP due to acenatobacter species and was treated successfully with antibiotics.

Key words: *neonate, suppurative parotitis, gram negative bacteria, bilateral parotid swelling, acenatobacter*

Introduction

Neonatal suppurative parotitis (NSP) is an uncommon illness in the neonate, with about 100 cases published so far. [1] This relatively rare entity generally responds well to antibiotic therapy, but does have the potential for serious complications. It is commonly caused by S. aureus but other bacterial isolates may be emerging. It is frequently related to prematurity, oral trauma, immunosuppressant, prolonged gavage feeding, ductal obstruction and dehydration of newborn that develop NSP. [2]

We describe first case of newborn who developed NSP due to acenatobacter species and who was treated successfully with antibiotics.

Case Report

A 7 days old male newborn presented with a 1 day history of fever, irritability and bilateral pre-auricular swelling. He was delivered vaginally at 35 wks of gestation and his birth weight was 2.500kg. Baby cried immediately after birth and was discharged after 48 hours of delivery. At home, baby was on top feed with cow's milk. Baby was brought to hospital on 6th postnatal day with complaints of fever, irritability and bilateral pre-auricular swelling. The parents reported no history of trauma to the infants face or head, and the

mother denied any history of breast tenderness or recent skin infection.

On admission, the baby was febrile, irritable and dehydrated, weighing 2.225kg and axillary temperature was 100^0F. Examination revealed bilateral symmetrical and fluctuant parotid swelling, 3 x 4cm each (Fig. 1) overlying skin was red, hot and necrosed in the central part of the swelling. Aspiration of the swelling revealed thick pus mixed with blood, which was sent for culture and sensitivity. The rest of physical examination was unremarkable.

Fig. 1 Bilateral symmetrical parotid swelling

Laboratory test revealed- Hb 11.6gm%, WBC count 10.200cells/mm^3, DLC N68M30M1E1, ESR 19 mm at end of 1 hour, urine analysis, renal and liver function tests were normal. The patient serum immunoglobulin (Ig) levels were low (IgG 4.78g/L, IgA 0.50g/L and IgM 0.34 g/L). Ultrasonography of the parotid glands demonstrated enlarged bilateral parotid glands with hypoechoic area compatible with acute suppurative parotitis. Parotid pus, blood and urine cultures were obtained and therapy with I/v cefotaxime 120 mg and vancomycin 30mg was started. The blood and urine cultures were sterile, however, acinobacter grew in the parotid pus culture on the 7^{th} day after admission which was not sensitive to initial started antibiotics. As the condition of baby did not improve during this period of time so based on sensitivity pattern antibiotics were changed to I/V Piperacillin + Tazobactum 200mg and Gentamycin 5mg. After 4 days of changed parenteral antibiotics therapy, fever resolved and on 8^{th} day of treatment swelling resolved. (Fig. 2) Antibiotic treatment was continued for 10 days and resulted in complete recovery.

Fig. 2 After completion of treatment

Discussion

NSP is an uncommon infection. Common predisposing conditions include prematurity, dehydration, and duct stasis. In infants, infection of the parotid glands appears to be more common than infection of the submandibular glands. [3, 4]

Spiegel et al reviewed the cases of patients with NSP during the past 35 years, mostly from case reports. NSP was unilateral in most cases, and swelling, with or without redness of the parotid region, was the most prevalent sign at the time of admission, our neonate had bilateral swelling with redness of parotid region. Thirty-eight percent of patients with NSP were born prematurely and, because 11% of births in the general population are preterm, prematurity should be considered as a

major risk factor for the infection. [5, 6] The increased risk of NSP among preterm babies has been attributed to their increased risk of dehydration, which may reduce salivary secretion. NSP is reported as more prevalent among boys, with a rate of almost 3:1. [5, 7] Our patient was male, premature and dehydrated. In the presented case, the infant was breastfed, and also on formula feeding.

The most common presentation of NSP is fever and swelling and erythema in the pre-auricular area beginning at between 7 and 14 days of life. The infection may be bilateral. [4] Parotid ultrasound may reveal a diffusely enlarged gland with a coarse echo pattern. [4] Our patient fulfilled the diagnostic criteria of suppurative parotitis: a combination of parotid swelling, purulent exudation from the Stenson's duct, and growth of pathogenic bacteria in culture of the pus. [5, 8]

S. aureus is the most common pathogen followed by viridans Streptococcus species and Escherichia coli. Gram-negative organisms such as Klebsiella pneumoniae and P. aeruginosa have been implicated in nosocomial and hematogenous infections secondary to sepsis. Recently anaerobic species have also been implicated.

In our patient acinatobacter grew in the parotid pus culture. This is first case of neonatal parotitis by acinatobacter. Initially we started with cefotaxime and vancomycin, later changed; a treatment of 10 days was given. Incision and drainage was not needed in our case.

Conclusion

Neonatal suppurative paotitis has excellent prognosis with proper treatment and does not require incision and drainage.

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