

Case Report

Cellulitis and Sepsis Caused by Group A Streptococcus in Saudi Neonate: Case Report

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ABSTRACT

We report a 40 day-old infant with late onset group A cellulitis and sepsis presented with fever and neck swelling with redness and tenderness. He was seriously affected and ventilated. Group A streptococcus (GAS) was isolated from blood within 24 hours. He was

dramatically improved with proper antibiotics and discharged home in good condition. Mother was healthy. We believe that the source of GAS was one of his brothers with tonsillitis, but no evaluation was done to confirm it.

KEY WORDS: cellulitis, group a streptococcus, neonatal

INTRODUCTION

A Streptococcal sepsis caused by group A Streptococcus is one of the major causes of neonatal infections^[1]. It can lead to serious Cellulitis and sepsis. The objective of reporting this case is to be aware of this infection and the need for immediate implementation of an aggressive treatment.

CASE REPORT

A 40-day-old male infant was admitted to our neonatal intensive care unit (NICU) with one day history of fever (38.6 °C axillary) associated with lethargy and poor feeding after being completely healthy. Followed next day by rapidly progressive submandibular swelling with redness (Fig 1).

He was a product of 36-week pregnancy for 32 years old gravida 4 para 3, healthy, Un-booked Saudi lady with un-eventful pregnancy and normal antenatal ultrasound. No history of prolonged rupture of membrane (PROM), delivered by normal spontaneous vaginal delivery with birth weight of 2.3 kg and normal Apgar scores. He was kept at NICU for 10 days after birth for borderline prematurity and discharged in normal condition after receiving routine vaccination. He was breastfed and mother was healthy. One of his brothers had tonsillitis five days prior to admission.

Examination revealed sick-looking infant with mottled skin and diffused neck swelling with redness, warm to touch with some tenderness, and no fluctuation. The infant was sick to the extent that he required mechanical ventilation. Full septic screen was done including cerebrospinal fluid culture and was started on vancomycin, cefotaxime, and clindamycin pending cultures results. C-reactive protein was very high (123 mg/L). CBC showed WBC count of 10×10^9 with 72% polymorphs. CSF result was normal as well as urine culture. Blood culture showed growth of group A Streptococcus (GAS) within 24 hours of admission. GAS was sensitive to clindamycin, Penicillin G, Ampicillin, and Cephadrine. The infant was shifted to Penicillin G. He showed good response to treatment and was extubated within six days, and was eventually discharged home in good condition.

DISCUSSION

Before the introduction of antibiotics, group A streptococcal sepsis (GAS) was one of the major causes of neonatal infections, the incidence of which reduced after antibiotic era^[1]. Group B streptococci and Escherichia coli have replaced GAS as the major causes of neonatal sepsis since the establishment of antimicrobial therapy^[2]. The mortality rate of invasive

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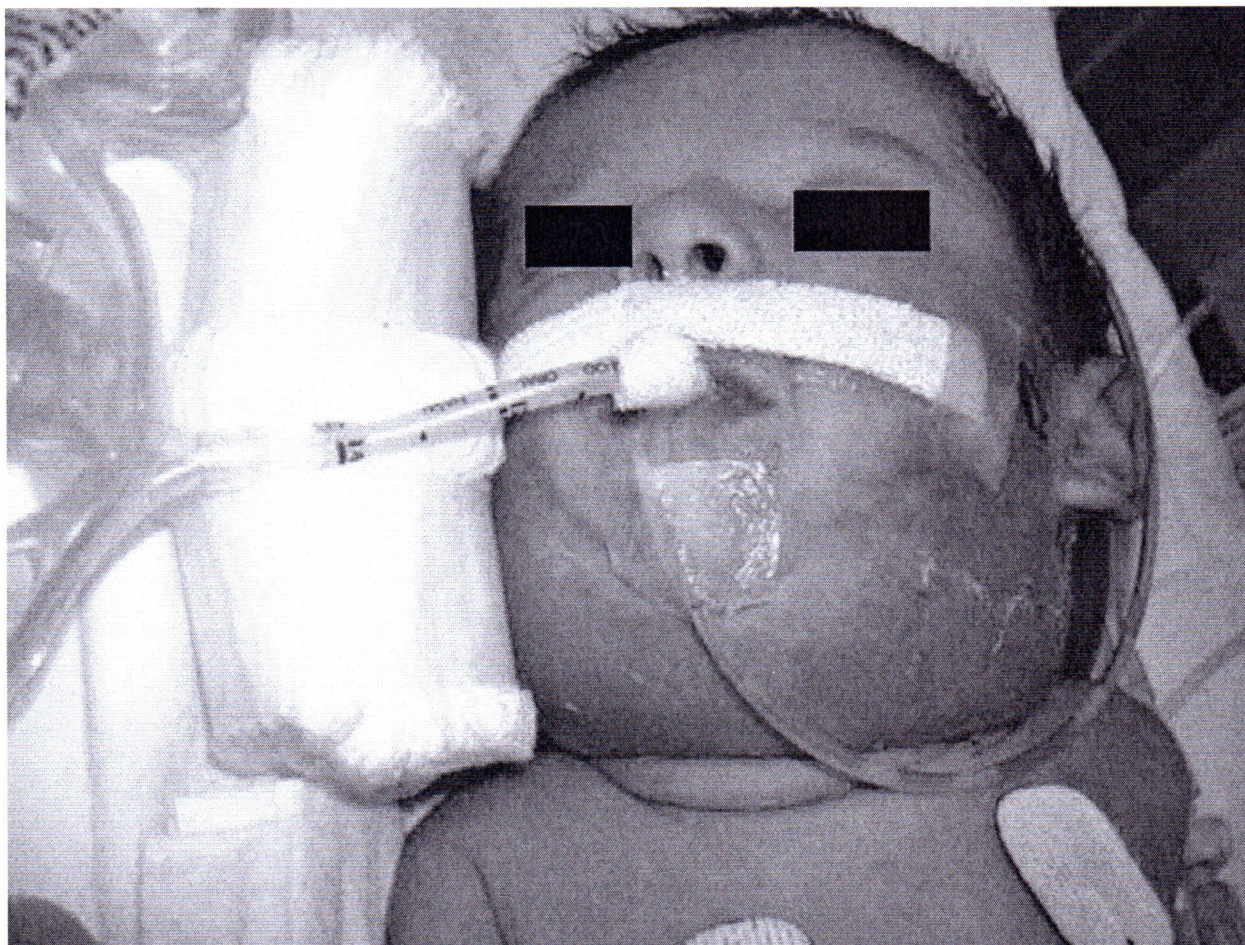


Fig 1: Diffuse swelling and redness on submandibular and frontal aspects of the neck

GAS disease in neonates remains high despite decline in its incidence^[3]. Most of the reported cases of invasive GAS in neonates were of early onset (<5 days) rather than late onset (>5 days)^[4].

The case we presented in this report was of late onset neonatal cellulitis and sepsis caused by GAS, and we suspect that GAS was most likely acquired from the child's 5-year-old brother who was suffering tonsillitis around the period of sickness of this child. Unfortunately, we did not investigate the brother to confirm the source of GAS in our patient. To the best of our knowledge, this is the first case of GAS causing neonatal cellulitis reported in Saudi Arabia. In fact, it is considered as a rare presentation worldwide, with mothers as the usual source of infection^[5].

CONCLUSION

The presence of neonatal cellulitis should be taken seriously and dealt with as serious invasive disease of neonates that can be often associated with sepsis. Full septic workup and immediate use of intravenous broad-spectrum antibiotics must be performed for all neonates with similar presentation of our case. Group A streptococcus should be considered as one of the

organisms that can cause serious invasive neonatal cellulitis and sepsis since there are reported cases in the literature. Mothers should be carefully evaluated looking for the source of GAS. Other members of the family and close contacts of neonates with GAS should also be carefully evaluated by conducting proper inquiries and performing proper investigations for suspected cases.

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