

Fournier's Gangrene in a Neonate: A Case Report

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Abstract

A 15 days newborn presented to paediatric OPD for evaluation of abdominal distension, not accepting feed properly and scrotal swelling. On examination gangrene was found on the scrotum, blood culture showed growth of streptococcal organism. Patient was treated with 3rd generation cephalosporin and local debridement of gangrenous scrotal tissue. Wound got healed by secondary intention and patient was discharged alive and healthy. The outcome of treatment of Fournier's gangrene in neonate is good.

Key words: Fournier's gangrene, Septicemia, Scrotal swelling, Phimosis, Wound debridement.

Introduction

Fournier's gangrene was initially described as a disease of young adult of unknown cause by Alfred Fournier in 1983. This disease is now recognized as necrotizing fasciitis of scrotum of infective origin. There is a report of Fournier's gangrene in neonate.

Case report

A 15 days newborn presented to the paediatric OPD with the complaint of not accepting feeds properly, distension of abdomen and scrotal swelling. Weight of the baby was 2.40kg, length 47.2cm and head circumference 34.3cm. Examination findings revealed icterus, distended abdomen, palpable spleen 2cm below the left costal margin. There was phimosis, and the scrotum was swollen and more than 2/3rd of the scrotal skin was gangrenous.

Investigations reports revealed a serum bilirubin total-12.4mg /dl (direct-7.5mg /dl), Hb 8 gm%, blood sugar and calcium levels were within normal levels, blood culture showed a growth of streptococci and the ultrasonography of the abdominal was normal. Empirical treatment was started with Inj.cefazidime and Inj. Amikacin, blood transfusion was given along with maintenance fluid as per daily requirement and magnesium sulphate dressing of scrotum was done.

On the 3rd day, the baby started becoming active, accepted feeding and icterus also decreased. On the 5th day a well defined demarcation line between gangrenous and healthy scrotal skin was seen, and then it was decided that debridement of gangrenous tissue should be done. So after debridement, the wound was healthy and the swelling had decreased. The part of the scrotum where the skin was deficient was repaired by secondary suturing. Later the baby was discharged from the hospital.



Fig 1: Photograph showing Fournier's gangrene on the scrotum of patient

Discussion

Fournier's gangrene is uncommon in neonatal period and little is known about the disease in this age group¹. Fournier's gangrene is a serious pathologic entity and comprises of infective necrotizing fasciitis of the perineal, genital or perianal regions. The infective process leads to thrombosis of the subcutaneous blood vessels resulting in gangrene of the overlying skin. The entity may have a rapidly fulminating or a slowly progressive course. This present case also had a rapid fulminating course with gangrene developing in 4-6 days². Controversies abound in defining Fournier's gangrene. Some suggested that the name Fournier's gangrene should be reserved for those cases in which a source of bacteria was not demonstrable^{3,4}. In children, phimosis, strangulated inguinal hernia, omphalitis, insect bites, trauma, urethral instrumentation, perianal abscesses, systemic infections, and burns are the predisposing condition for the development of the disease⁵. In this case, the source of bacteria was demonstrated and the baby was suffering from neonatal septicemia. Auwal et al describe, that one out of two cases presented with severe neonatal septicemia and anaemia⁶. This case also presented with severe neonatal septicemia and anaemia. The underlying cause of Fournier's gangrene may lie in urinary tract, colorectum or local skin and the usual offending organisms are E Coli, Bacteriodes, Staphylococci, Streptococci, Clostridia etc⁹. In this case an underlying cause is present in the blood stream and gram negative streptococci were also demonstrated. Fournier's gangrene is primarily a disease of the adults. The male to female ratio is 10:1. But more than 55 cases of Fournier's gangrene have also been reported in the pediatric age group, most of them being under three months of age^{7,8,9}. Twelve neonates and infants aged five days to three months were reported from Nigeria. The precipitating causes were omphalitis, strangulated inguinal hernia and systemic infection. Treatment consisted of debridement of devitalised tissue and administration of broad-spectrum antibiotics. In the above case, treatment consisted of debridement and administration of broad-spectrum antibiotics after which the wound was healthy and the child well.

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Conclusion

Fournier's gangrene in neonates and infants is largely preventable, it should be thought of in cases where necrotizing fasciitis of the perineal, genital or perianal regions. Early debridement and appropriate antibiotics give good results

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