

Case Report

A Rare Case Report of Gangrene In The New Born

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ABSTRACT

Gangrene in a neonate is a rare clinical problem; it results from diminished perfusion of blood to a part of the body, usually the extremities. A variety of etiological factors may account for this situation. Arterial thrombosis, emboli, trauma, congenital heart disease, sepsis, coagulopathy, polycythemia, congenital bands, umbilical catheterization and birth trauma are some of the causes which should be considered. In majority of cases, an etiological factor may not be identified. The management of neonatal gangrene is usually conservative or radical, preventing infection of the affected part and allowing the gangrenous portion to heal by itself in order to optimize future reconstruction and rehabilitation or complete amputation of the affected limb. In this paper, one rare case of a newborn with gangrene of all the extremities is reported.

Key words: Neonatal Gangrene.

INTRODUCTION

It is uncommon to see peripheral limb ischemia and gangrene occurring in the first few days of life. This condition may be precipitated by a wide variety of factors, prenatal and perinatal, leading to vascular occlusion.^[1,2] Treatment of this condition is supportive and includes adequate hydration, prevention of sepsis. Once the gangrene is established, surgical debridement and rehabilitation should be considered.

In this paper we are presenting one rare case of neonatal gangrene without associated anomalies. No etiological factors were identified in this case.

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CASE REPORT

A single live female baby delivered vaginally at term, born of 2^o consanguineous marriage following regular antenatal check-up. She is the 2nd child, 1st child is 2.5 year old girl, alive & healthy. On day 2, mother noticed pink lesion over left thigh and gluteal region which turned black and became firm. On day 3 baby developed high grade fever and toes of left feet were swollen & red, later turned black and lost movement. On Day 4, baby developed high grade fever, all toes of right feet swollen, red, later turned black & lost movement. On day 5 baby developed red lesion on right thigh which turned to black later. From day 6- 8 there was not much progress in the disease process. On day 9, dorsal surface of hand became red involving right middle finger and all fingers of left hand, which turned black later (Figure 1 & 2). On Day10 bullae was formed in the gluteal region which ruptured and became ulcerative. Child was brought to our

hospital on Day 13 of life. There were no predisposing factors like arterial thrombosis, emboli, trauma, congenital heart disease, sepsis, coagulopathy, polycythaemia, congenital bands, umbilical catheterization and birth trauma.



Fig 1: Shows gangrene of right hand



Fig 2: Shows gangrene of right and left foot

Following investigations were done to find out the etiology:

CBC : Hb 9.3gm/dl, WBC-33,500cells/cumm, Plt-1.62lakh/cumm,

PCV-25.9%, BLOOD GROUP O POSITIVE, CRP 48mg/dl

DLC : Neutrophil 72% Lymphocytes 19% Band forms 9%

PBS: hypochromic anemia with neutrophilic

leukocytosis.

PT 19.4Sec CONTROL 15.5 Sec INR 1.3

aPTT 44.7Sec CONTROL 32 Sec

BLOOD CULTURE: no growth of any micro organisms.

Pus Culture from gangrene site:-
entrobacter species and stenotrophomonas (xantho) maltophilia grown. Sensitive for amikacin, ciprofloxacin, imipenem, chloramphenicol, meropenem.

RFT: BLOOD UREA:18mg/dl S.creatinine: 0.5mg/dl;

SODIUM: 126 mEq/L; POTASIUM: 4.8 mEq/L; CALCIUM: 9.3 mEq/L

Chest X RAY: normal

2D ECHO: mild MR, mild TR with secundum ASD with mild PAH

ARTERIAL DOPPLER OF ALL LIMBS: normal study

USG ABDOMEN: b/l hydronephrosis with thickening of bladder wall.

Protein c and Protein s estimation was not done due to unaffordability & unavailability of the test.^[6]

Baby has been started with Inj Piperacillin and Inj Amikacin & iv fluid, fresh whole blood transfusion was given in view of anemia and prolonged aPTT, instead of multiple component therapy which was economical. In spite of this treatment gangrene progressed involved till ankle and completely around the perineum. On day 17 of life baby expired.

DISCUSSION

Bilateral Idiopathic lower limb gangrene in neonates is extremely rare and very few cases

have been recorded. Though no such procedure was done on this baby, umbilical Catheterizations have been most commonly associated with complications such as local vascular (blanching or cyanosis of feet or toes) or more extensive ischemic compromise, necrosis of the buttock and labia majora, neonatal aortic thrombosis, renovascular hypertension.^[7] Peripheral gangrene could happen in premature neonates even without catheterization. Abnormal fetal presentation can cause ischemia due to direct compression of an extremity *in utero*. Arterial occlusion due to normal obliteration of ductus arteriosus or umbilical arteries can lead to high incidence of gangrene in lower extremities.^[8] However, review of the available literature reveals that upper limb gangrene is more frequent as compared to lower limbs. In this case, gangrene of the extremities is without any predisposing factors. The gangrenous changes were possibly caused by vascular occlusion resulting from severe sepsis. Management includes giving medications (systemic and local) and supportive care like heparin, vasodilators, hyperbaric oxygen, sympathectomy, preventing trauma and sepsis. Early surgical intervention is indicated in presence of severe or progressive ischemic changes.^[9] More often there has been progression to spontaneous slough or autoamputation. Amputation should be done following appearance of demarcation line.^[10] Care should be taken to preserve the growing epiphyseal end so as to achieve a good stump length for prosthetic fitting in the later age

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