

## Symmetrical Peripheral Gangrene: A Catastrophe of Toxic Shock Syndrome in Children

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### INTRODUCTION

Symmetrical Peripheral Gangrene (SPG) is a clinical syndrome marked by distal ischemia causing limb gangrene. We report a 2-year-old girl who experienced severe toxic shock syndrome due to *Klebsiella pneumoniae* infection, leading to symmetrical peripheral gangrene affecting all four limbs.

### CASE REPORT

A 2-year-old girl, allegedly drowned at home for 10 minutes, admitted for severe respiratory distress. Stabilized in the ICU, she then was diagnosed with severe ARDS associated with *Klebsiella pneumoniae*. Managed with low-dose inotropes due to septic shock, blood parameter revealed severe infection with DIC. Multiple antibiotics were initiated based on cultures. After a week, child developed marked coldness and discoloration in fingers and toes of all limbs. A multidisciplinary team managed the child, addressing predisposing factors and treating the severe infection. The child underwent amputations at specific levels for both upper limbs and both feet, with successful resolution of the *Klebsiella pneumoniae* infection after that.



**Figure 1:** Distal Gangrene of all limbs

### DISCUSSION

Symmetrical Peripheral Gangrene (SPG) is a rare syndrome affecting all age groups, including pediatric. Infections are common cause, and DIC is a prevalent predisposing factor. The pathogenesis involves endotoxin release, platelet clumping, and DIC. Initial signs include marked limb coldness and pallor or cyanosis, with progression to gangrene. Gangrenous patterns are symmetrical, and purpura fulminans often precedes gangrene but wasn't observed in this case.

Mortality rates are high about 35% and often leading to auto-amputation or surgical amputation for survivors. Correction of DIC and maintaining intravascular volume are necessary, and caution is advised in using vasoconstrictors to avoid aggravating SPG. Early amputation before demarcation is not recommended. Preservation of joint motion is beneficial during the early phase of gangrene.

### REFERENCES

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