

## Symmetrical Gangrene in Both Lower Limbs in Pneumococcal Pneumonia

Sir,

Symmetrical peripheral gangrene (SPG) is a well-documented but rare clinical syndrome characterized by symmetrical distal ischemic damage leading to gangrene of two or more sites in the absence of large vessel obstruction or vasculitis.<sup>[1]</sup> Herein, we present a case of SPG due to *Streptococcus* or pneumococcal pneumonia.

A 35-year-old male presented to our hospital with complaints of high-grade fever of 10 days along with cough and expectoration. He also noticed bluish discoloration of his toes which progressively increased up till his bilateral knees within the next 5 days. He was diagnosed as a case of upper respiratory infection and was given symptomatic treatment for 6 days at a private clinic with no relief. Hence, he has referred to our hospital. On examination, bilateral lower limbs with bluish discoloration of toes and ankles were noted along with tender pitting edema [Figure 1]. Anterior tibial artery, posterior tibial, and dorsalis pedis artery were not palpable in both lower limbs [Table 1]. Respiratory examination revealed bronchial breath sounds with crackles on inspiration in the right infrascapular area.

Laboratory tests revealed hemoglobin 12.5 g/dL of hemoglobin with a total leukocyte count of 29,000 cells/mm<sup>3</sup> with normal platelet and differential counts. Kidney and liver function tests were within normal limit. Chest X-ray revealed a homogeneous opacity in the right lower zone with syn-pneumonic pleural effusion. Lower limb

arterial and venous Doppler scan revealed reduced velocity of jet in bilateral lower limbs. Blood culture was positive for *Streptococcus pneumoniae* after 48 h of incubation which was sensitive to ceftriaxone, azithromycin, linezolid, vancomycin, and levofloxacin. He was started injection ceftriaxone 1 g intravenous (IV) twice a day, and injection azithromycin 500 mg IV once a day with supportive treatment. Within 24 h his condition improved and later on, he was discharged on the 10<sup>th</sup> day on oral antibiotics. However, during subsequent outpatient visits, the patient presented with well-demarcated gangrene of all the toes for which he underwent below ankle amputation [Figure 2].



**Figure 1:** Bilateral symmetrical gangrene in both lower limbs on the day of admission



**Figure 2:** Bilateral well demarcated Gangrene during subsequent outpatient visit

**Table 1: Examination of peripheral artery in both lower limbs**

Peripheral artery in both lower limbs	Pulsation (in both lower limbs)
Popliteal artery	Present
Anterior tibial artery	Absent
Posterior tibial artery	Absent
Dorsalis pedis artery	Absent

The pathogenesis of SPG is not well understood. A low-flow state is commonly present in association with a hypercoagulable vasospastic situation leading to microcirculatory occlusion. The ischemic changes begin distally and may advance proximally to involve a whole extremity. The pathogenesis of SPG may involve the Schwartzman reaction, bacterial endotoxin release, and platelet plugging in peripheral arterioles due to vascular collapse and disseminated intravascular coagulation.<sup>[2]</sup> Empirical treatment includes IV antibiotics (a) a respiratory fluoroquinolone or (b) b-lactam plus a macrolide. Increasing resistance rates have suggested that empirical therapy with a macrolide alone can be used only for the treatment.<sup>[3,4]</sup> Amputation of gangrenous areas is deferred till the general condition of the patient improves, and the gangrenous area is well-demarcated.<sup>[5]</sup>

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published

and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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