

A Potential Danger for Children: Anthrax Çocuklar İçin Potansiyel Bir Tehlike: Şarbon

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Herein we report a cutaneous anthrax in a child from eastern region of Turkey. A six-year-old girl has admitted pediatric emergency clinic with a black eschar on her right thumb. The patient's parents described an erythematous painless papule on this region starting five days ago. There was no prior history of insect bite or trauma. Her parents job was livestock farming and living in an area endemic for anthrax. The body temperature was 36.7°C, pulse rate was 105/min, blood pressure was 95/65 mm/Hg, and respiratory rate was 24/min. A 1.5x1.5 cm irregular and black skin eschar was detected on the right thumb with central necrotic appearance (Figure 1). Examination of other systems was normal. Laboratory examinations showed that the leukocyte count was 12770 mm³ and C-reactive protein level was 0.55 mg/dL (normal: 0-0.8 mg/dL). Other laboratory results were normal. Lesion swab and blood samples were taken for *Bacillus anthracis* culture but no bacterial growth was observed. Although blood polymerase chain reaction (PCR) was negative, PCR of the swab specimen obtained from lesion was positive for *B. anthracis* plasmids (pXO1 and pXO2) (Figure 2). According to the WHO guidelines, the primers PA5-PA8 for the amplification of the protective antigen broad region of plasmid pXO1 and the CAP 1234-CAP 1301 primers for amplification of the plasmid pXO2 capsu-

lar region were used in the PCR reaction (4). The PCR reaction was run on a Qiagen RotorGene 6000 (Hilden Germany) Real-time instrument using Evagreen qPCR master mix (Bio-Rad Lab Inc USA). Cutaneous anthrax was diagnosed and the patient was hospitalized.



Figure 1. A 1.5x1.5 cm irregular and black skin eschar on the right thumb with central necrotic appearance

Intravenous ampicillin-sulbactam was administered for five days. The lesion began to heal after the fifth day of treatment and the patient was discharged from hospital with intramuscular ampicillin-sulbactam.

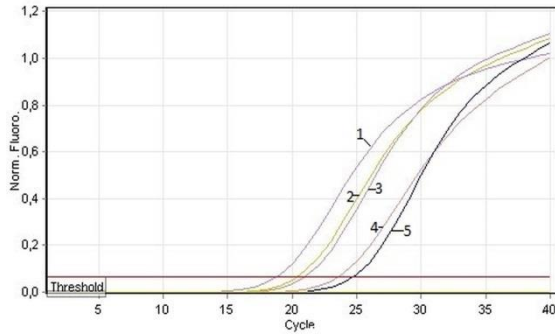


Figure 2. Real-time PCR amplification plot: 1- PA *B.anthraxis* Max Sterne strain, 2 –PA *B.anthraxis* Wild strain (RSKK 97018), 3- CAP *B.anthraxis* wild strain (RSKK 97018), 4- CAP Patient swap sample, 5-PA Patient swap sample

Bacillus anthracis, the etiological agent of cutaneous anthrax, is a gram-positive, rod-shaped, sporulating and toxin-producing bacterium. Cutaneous anthrax is the least severe and the most common form of the disease (approximately 95 % of all reported cases). The other more severe forms of the disease are gastrointestinal and inhalational anthrax. Anthrax is hyperendemic/epidemic in Turkey particularly in the eastern and southeastern regions (1,2). The diagnosis of anthrax depends on clinical suspicion and the cutaneous anthrax lesion is so characteristic therefore the diagnosis is usually not overlooked. In recent years, PCR-based systems have successfully performed in suspicious cases in addition to culture and gram staining methods (2,3).

Cutaneous anthrax should be considered in any patient with a painless black necrotic eschar who lives in an endemic area.

Conflict of Interest: No conflict of interest was declared by the authors.

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