

A rare pathogen causing fatal metastatic deep-seated abscesses in a paediatric patient

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Introduction: *Chromobacterium violaceum* is a soil and water saprophyte confined to tropical and subtropical areas. It survives in temperatures between 20 °C – 37 °C in dry or wet weather. Incubation time may vary from 3-14 days depending on the type of exposure. Human infection with *C. violaceum* is rare; high case fatality rates have been reported.

Case Report: A 2 year and 11 months old girl was admitted with fever and vomiting for 2 days and 10 episodes of loose stools for 1 day. Before admission, she was taken to two general practitioners due to high fever which didn't respond to paracetamol.

She was delivered by vaginal delivery at term with a good birth weight and was diagnosed with neonatal jaundice and phototherapy was given. At 6 months, she was treated for meningitis. Her immunisation history was up to date and her development was age appropriate. This patient had a history of exposure to soil water two days before onset of her symptoms while having local skin sepsis on her feet.

On admission, she was ill looking and febrile (102.6 °F) with a blood pressure of 91/41mmHg, pulse rate of 120 beats/minute and respiratory rate of 60 breaths/minute. Investigations revealed polymorphonuclear leukocytosis and high C reactive protein with mildly elevated liver functions. She was given two doses of cefotaxime, one dose of penicillin, ciprofloxacin, amikacin and meropenem without any clinical improvement, had a cardiac arrest and died on the following day.

Her blood culture was positive 24 hours after incubation and was identified as *Chromobacterium violaceum* by its dark violet pigmentation. Postmortem revealed multiple liver and lung abscesses.

Conclusions: Our patient had a history of soil water exposure 2 days prior to her symptoms. Further, she had a history of neonatal jaundice and meningitis, which might be due to a previously unevaluated immunodeficiency state.

Risk factors for this infection include young age, chronic granulomatous disease, neutrophil dysfunction, and immunosuppression. This pathogen typically invades through the oropharynx/ conjunctiva/ skin lesions in association with exposure to contaminated soil or water. However, the rapid progressive nature of the disease and high case fatality caused the failure in improving the outcome.

Keywords: *Chromobacterium violaceum*, liver and lung abscesses, sepsis

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