

TITLE: ISOLAMENT AND IDENTIFICATION OF CHROMOBACTERIUM VIOLACEUM SITEMIC USING MALDI-TOF MASS SPECTROMETRY

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ABSTRACT:

Chromobacterium violaceum is the only species in the genus *Chromacterium*, which belongs to the *Neisseriaceae* family. It is a facultative, mobile and anaerobic Gram negative bacillus. It presents optimum growth below 37 ° C and its habitat primarily soil and water of tropical and Subtropical climates. Most colonies produce a violet pigment called violacein. Human infections are rare, being the skin, the main entrance. There are reports of severe sepsis associated with multiple abscesses in the liver, spleen, lungs and brain, progressing to toxemia, confusion, shock and death. It is usually resistant to several antibiotics, but is often susceptible to Imipenem, Fluoroquinolones, Gentamycin, Tetracycline and Sulfamethoxazole-Trimethoprim. Therefore, because it is a serious disease, the identification and reporting of such bacteria is relevant.

The aim of this work is to present a case study of *C.violaceum* in blood. Reporting is relevant due to site of infection and severity of the disease. A descriptive study reporting the case of a male patient in whose biological material *C.violaceum* was isolated. The sample was submitted to identification by MALDI-TOF mass spectrometry. The patient's data were obtained to discuss the case among the professionals involved. A 54-year-old male patient with hepatitis C and with axillary abscess due to depilation presented fever and pain. He went through a dermatologist who chose not to drain the abscess and to prescribe Cefalexin every 8 hours. There was no condition improvement, with outpatient and inpatient care. Fever persisted and the patient underwent drainage of the abscess and use of cephalixin every 6 hours. The condition worsened and the patient was submitted to induced coma, with intubation occurring and the development of hepatic and pulmonary abscesses. The medication was changed to Piperacillin-Tazobactam and Meropenem, however, there were no signs of improvement.

The presence of *c. violaceum* in clinical samples in the laboratory should be evaluated. For being a species with greater rarity, it is necessary the precise diagnosis, as well as reporting to the responsible for the appropriate clinical actions. For the patient in question, it can be assumed that the infection originates from an axillary wound that improved to an abscess. Because it did not respond to the therapies initially adopted, it was decided to use intravenous amikacin. There was a satisfactory answer and the patient presented significant signs of improvement, being able to leave the hospital.

Keywords: *Chromobacterium violaceum*, Maldi-Tof, Mass Spectrometry, Sepsis.

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