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Letters to the editor

Chromobacterium violaceum: A potential nosocomial pathogen

To the Editor:

Chromobacterium violaceum is a motile gram-negative bacillus found as a saprophyte in soil and water.[1,2] It is characterized by production of a purple pigment named *violacein*.[2] It was first reported as a human pathogen in 1927 in Malaysia.[1] Currently, it is recognized as a highly virulent opportunistic pathogen to humans, and several cases have been reported mostly from tropical and subtropical areas.[1,2]

Usual portal of entry of *C violaceum* is skin. The most common presentation in patients infected with *C violaceum* is sepsis, which is frequently life threatening.[3] The other common manifestations include cutaneous involvement, followed by abscesses in liver, lungs, spleen, lymph nodes.[1,3] Disseminated *C violaceum* infection has been reported to be associated with 60% to 80% mortality.[1] *C violaceum* is frequently disregarded as a contaminant or misidentified. The awareness regarding this infection needs to be raised to a high degree because it is associated with high fatality rate.[4]

C violaceum has been commonly reported to be resistant to penicillins and cephalosporins. Therefore, in most cases of *C violaceum* infection, the initial empirical therapy based on penicillins and cephalosporins will not be effective and can result in increased mortality because of delay in initiation of appropriate therapy.[1] However, it is usually susceptible to cotrimoxazole, fluoroquinolones, aminoglycosides, chloramphenicol, and carbapenems.[1]

C violaceum is able to survive under diverse environmental conditions because it produces several proteins contributing for its tolerance to antimicrobial compounds, heavy metals temperature, and acid.[5] In our study, *C violaceum* was isolated 4 times from water samples collected under sterile precautions from operation theater taps of our hospital. Because contaminated water is the source of infection and skin is the usual portal of entry of this organism, these isolates from the hospital environment can be a source of nosocomial infection.[1,4] This can lead to fatal infection such as septicemia or deep abscess during pre- and postsurgical periods. Once infection is established, it should be diagnosed early, and prolonged antibiotic treatment is required.[6] Regular surveillance of operation theater and critical care units for *C violaceum* in water samples is necessary to prevent mortality. Proper water treatment and safe water supply are also essential.

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Conflicts of interest: None to report.

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The impact of antimicrobial resistance and the challenge for professionals

To the Editor:

Bacterial resistance is considered a public health problem worldwide, and efforts have been made to prevent and control this epidemic. The spread of resistant microorganisms is the major challenge that mobilizes national and international organs of epidemiologic surveillance and control.[1,2]

Antimicrobial agent use and environmental factors of transmission have important roles in the emergence and spread of resistance mechanisms. Such measures as auditing antimicrobial use, hand hygiene, contact precautions, and in-service education do not always provide the expected contributions for resistance prevention and control.[3] It is important to stress that host-related factors and the selective pressure generated by antimicrobial agents, as well as easy movement of people, hinder the establishment of care.

In Brazil, according to the Ministry of Health, more than 70% of the bacteria that cause hospital infections are resistant to at least one antimicrobial agent commonly used in patient treatments.[1] Infected individuals have longer hospital stays and require treatment with drugs that may be less effective, more toxic, and more expensive and have a lower genetic profile. Bacterial resistance is