Chryseobacterium meningosepticum cellulitis and sepsis in an adult female with pemphigus vulgaris

Dear Editor,

Chryseobacterium meningosepticum is a gram negative rod which causes disease predominantly in premature newborns and infants.[1] It is an opportunistic pathogen of low virulence that rarely causes serious infections in adults. Cellulitis occurs in 3% of all *C. meningosepticum* infections described.[2]

A 38 year old female presented to the Emergency Department of a tertiary care hospital in Jaipur with complaints of breathlessness and non-healing necrotic ulcers over the anterior chest wall. The patient appeared toxic with deranged vitals. The patient was an earlier diagnosed case of Pemphigus vulgaris and had a history of being admitted at a local nursing home for the past three months before being referred to the hospital. The patient was also a known diabetic and was on oral hypoglycemic agents, steroids and Methotrexate.

Medical management consisting of i.v. fluids, antibiotics (Cefoperazone/sulbactam - 1 gm I.V.12 hourly and Amikacin - 750 mg I.V. stat) and steroids was commenced. The patient was diagnosed as case of Pemphigus vulgaris with superadded infection and septicaemia.

At the time of admission the patient's lab investigations showed deranged liver and renal function tests with WBC count-32,000/microlitres (N-76, E-00, L-12, M-01, band cells-11). Two Blood cultures (BACTEC) and one wound swab from the anterior chest wall were collected for culture.

Over the next 36 hours of admission the patient's condition deteriorated further with D dimmer values > 4 < 8 and FDP (semi quantitative) > 20 < 40 micrograms / ml and she succumbed to death.

The cultures were processed in the lab as per standard microbiological techniques. Similar isolates were obtained from all three cultures with orange colour pigmented colonies on blood agar and no growth on Mac Conkey agar. The organism on BA was a GNB, oxidase positive, non-motile, indole positive and produced yellow pigmented colonies on nutrient agar [Figure 1].

The isolates were identified as Chryseobacterium meningosepticum using the Microscan® Walkaway SI automated system at our Mumbai reference lab. The organism was found sensitive to Levofloxacin, Trimethoprim/sulphamethoxazole and resistant to Amikacin, Aztreonam, Cefazolin, Cefepime, Cephotaxime,

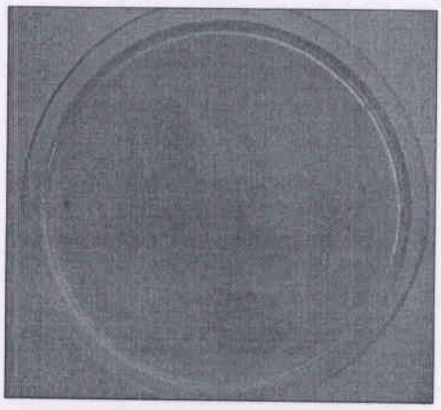

Figure 1: Yellow coloured colonies of *C. meningosepticum* on nutrient agar

Gentamicin, Imipenem, Meropenem, Tetracycline and Tobramycin. The identity of all three isolates was reconfirmed on the mini API system (Biomeriux). However the patient had already expired by the time culture and sensitivity reports were made available.

This patient had diabetes mellitus, Pemphigus vulgaris and was on steroids; in accordance with previous reports that C. meningosepticum infection often occurs in immuno-compromised adults.

The stay of the patient in our hospital was less than 48 hours but considering the patient's history of previous hospitalization for three months, it is suggested that the organism was nosocomially acquired. In the hospital environment, wet and dry environmental surfaces and equipment may act as a source or play a role in disseminating the microorganism.[3]

This organism is usually multi-resistant to antibiotics typically prescribed for treating gram negative bacterial infections including extended spectrum beta lactam agents, aminoglycosides and Imipenem and thus causes clinical concern.[4]

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Received: 05-11-2009
Accepted: 29-04-2010

DOI: 10.4103/0255-0857.66481