CASE REPORT

Bacteremia Associated with Central Line Infection by Chryseomonas Luteola in a Case of Recurrent Meningiomas.

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Case Summary

A 52 years old diabetic and asthmatic lady was admitted in the Neurosurgery service with a post-operative wound infection 10 days following removal of meningioma. The patient had a history of recurrent meningiomas for which she had undergone multiple surgeries during the past ten years.

On admission, the patient was febrile and drowsy. There surgical wound site over the scalp was swollen, exuding a pussy discharge. Subsequently, a lumbar drain was inserted for CSF drainage, the yellowish discharge from the wound was sent for culture, which grew Streptococcus pyogenes for which I/V Ceftriaxone was started. The patient improved and remained stable till about the 25th day of hospital stay when she developed fever, chest infiltrates as well as copious pussy discharge from the wound.

Due to rapid deterioration in patient's condition she was shifted to ICU. Piperacillin tazobactam was started and lumbar drain was removed. The scalp wound was re-explored and a flap closure was done; an epidural drain was inserted for CSF drainage. As the patient did not improve clinically, all antibiotics were stopped and patient was rescreened for infection. One set of blood culture drown from a peripheral vein and the tip of pulmonary artery catheter grew *Chryseomonas luteola*. This organism was sensitive only to Ofloxacin and the patient's antibiotic regimen was changed to Ofloxacin along with Aztreonam and Amikacin. The patient gradually improved on this regimen, was moved out of the ICU and subsequently managed in the ward.

Discussion

Chryseomonas (CD4 group Ve-1) are normal inhabitant of soil and environment usually regarded as a saprophyte or commensal rarely recorded as pathogenic to humans[1-3]. Previously they were named as *Pseudomonas luteola* due to resemblance with *Pseudomonas*. Most victims are immunocompromised or immunocompetent patients with a foreign body inserted.

Chryseomonas luteola is a non-sporing non-motile gram negative rod with a distinct yellow orange pigment. Growth on Mackonkeys agar shows rough or wrinkled colonies, biochemically they are non lactose fermenters, oxidase negative and catalase positive. *Chryseomonas luteola* has been reported to cause septicemia[4], bacteremia in cases of granulomatous hepatitis [5], prosthetic valve endocarditis [6], meningitis associated with intracranial prosthesis [7] and in patients with indwelling intra-vascular catheters[8]. Bacteremia with *Chryseomonas luteola* has been noted in immunocompromised patients, especially those with an indwelling catheters.

Few clinical case reports have been published regarding isolation of *Chryseomonas luteola*. In one such published report by Ghosh [3] this organism was isolated from a superficial cutaneous infection on face in an AIDS patient. Another report of *Chryseomonas* related facial cellulites was reported by Rastogi et al[9] in a homosexual HIV-negative male.

Rahav et al[10] in his case series reported four cases of *Chryseomonas luteola*, in which two of the cases were associated with the presence of a central line; one strain was isolated from an infected hip joint and another one from ascitic fluid of a patient with colonic carcinoma.

Most clinical isolates of *Chryseomonas luteola* reported so far have been resistant to ampicillin, tetracyclines, trimethoprim–sulfamethoxazole and first and second generation cephalosporins, but susceptible to third generation cephalosporins, mezlocillin, imipenam, aminoglycosides and quinolones[11-13].

In the present case, though the patient was not labeled as immunocompromised but history of steroid therapy in past and multiple surgeries for recurrent meningiomas, with prolonged hospital stay make her immune status compromised.

In the present case, the patient was not a labeled as immunocompromised and was not on any regular immunosuppressive therapy when she developed this infection.

Chryseomonas luteola was isolated both from the pulmonary catheter tip and blood culture, suggesting bacteremia secondary to line colonization. Like all previously reported *Chryseomonas luteola*, our isolate was sensitive to fluorouinolones and patient was treated with Ciprofloxacin and recovered from the infection

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Isolation of a rare organism like *Chryseomonas luteola* underscores a need for clinicians as well as laboratories to be aware of the importance of such organisms as pathogens, particularly in critically ill or immunocompromised patients. With increasing numbers of patients with immunodeficiencies with long term indwelling catheters and prostheses, and increasing use of immunosuppressive therapy for various conditions, isolation of such organisms in clinical samples should be evaluated critically and special care must be taken before disregarding them as contaminants.

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