

In Vitro Study on Virulence Potentials of *Burkholderia pseudomallei* Isolated from Immunocompromised Patients

Abstract:

Eighty four throat swabs were obtained from Basrah General Hospital inpatients (N = 34): 17 were suffering from renal failure and the other 17 were diabetics; and from outpatients (N= 50). Throat swabs were cultured first in the selective media Ashdown's broth then subcultured on Ashdown's agar to isolate *Burkholderia pseudomallei* which was recovered from seven cases (8.33%). Four isolates were from renal failure patients (23.53%), two from diabetic patients (11.76%) and the seventh isolate was from an outpatient with tonsillitis. All isolates were able to produce capsules, form filament chains, exhibit swarming motility and were arabinose non assimilators (Ara-) indicative of their virulence. Additionally, isolated *B. pseudomallei* were found to produce protease, lipase, hemolysin, and lecithinase and were able to produce biofilm, the root of many troublesome persistent infections that resist antibiotic treatment. Susceptibility of the seven isolates of *B. pseudomallei* toward 11 antibiotics was assessed, isolates were found multiply resistant to all antibiotics apart from ciproflaxin. This study confirms for the first time isolation of *B. pseudomallei* from immunocompromised patients in Basrah city of Iraq and describes their virulence potentials.