Blood culture improves early detection of subclinical tuberculosis in HIV-1 infected persons

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In early stages of HIV infection, even if the infection is controlled and asymptomatic, several macrophages are loosened from granuloma, carry the mycobacteria within them, and help disseminate the infection through haematogenous route. By this time mycobacteremia may or may not cause clinical symptoms. In the current communication, we report findings of a study carried out on a cohort of 60 HIV-1 infected patients attending antiretroviral clinic at All India Institute of Medical Sciences, New Delhi, India. After taking informed consent from the cases blood and sputum samples were collected and processed, inoculated for culture examination under aseptic conditions, incubated at 37°C. Mycobacteremia was detectable in 40.7% of subjects whereas sputum cultures were positive in 48%. The rate of mycobacteremia was slightly higher in asymptomatic patients (44.4%, 8 of 18) than symptomatic patients (39%, 16 of 41). However, sputum positivity was higher in symptomatic cases (50%, 16 of 32) as compared to asymptomatic (44.4%, 8 of 18). Six (33.3%) asymptomatic cases had mycobacterial growth in both blood and sputum samples. Our study shows that HIV-1 positive cases, (symptomatic/asymptomatic), must be investigated for tuberculosis and blood culture has equal TB detection rate, if not higher, than sputum culture. Blood culture examination is desirable, specially in those patients who are asymptomatic and can not expectorate.

Biography
Arshi Munawwar is a PhD Scholar in Division of Clinical Microbiology and Molecular Medicine, Department of Laboratory medicine, AIIMS, New Delhi. During his PhD tenure, he has published 10 research papers and two chapters in reputed journals/books and few more manuscript are under consideration. He is also serving as an Assistant Editor in a reputed journal run by the PI. He has received various international awards during his PhD.

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