The use of Cefoxitin MIC test has not been recommended by the CLSI-AST, but its performance was equivalent to Cefoxitin DD when using modified breakpoints of less than or equal to 4 µg/ml for susceptible and greater than or equal to 8 µg/ml for resistance. The results of Cefoxitin DD method were better for isolates with Oxacillin MIC between 4-6 µg/ml (Table). Both Oxacillin DD and Cefoxitin DD gave reproducible results on 30 occasions for 10 MRSA and 10 MSSA strains however, Oxacillin DD gave inconsistent results for five strains with MIC 4-6µg/ml on several occasions in comparison to Cefoxitin DD which gave consistent resistant results for these five intermediate resistant strains. Our study also revealed that low level Oxacillin resistance was detected better by Cefoxitin DD test.

Detecting mecA gene characterization by PCR/PBP2a is recognized as gold standard for detection of MRSA. However, use of PCR assay is generally limited to reference laboratories, especially in developing countries. Our study clearly showed, the substitution of a Cefoxitin DD for an Oxacillin DD test, will result in an easier to read test with greater accuracy for detection of Methicillin resistance in S. aureus.

References


M Gupta, *NP Singh, A Kumar, IR Kaur

Department of Microbiology, UCMS & GTB Hospital, Delhi - 110 095, India.

*Corresponding author (email: <singhmanjna@yahoo.co.in>)
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Calvarial Tubercular Osteomyelitic Abscess

Dear Editor,

Tuberculosis which is quite common in developing countries is on an upsurge in developed countries in association with immune deficiency syndromes. Reid in 1842, described the first case of calvarial tuberculosis.[1] Raut et al., reported in their study for a decade, 42 cases of calvarial tuberculosis confirming the rarity of tuberculous lesion in skull.[2]

This 29 year-old male, presented to us in April, 2008, with headache and scalp swelling over the left frontal region, treated with over the counter analgesics. The progressive increase in size of the swelling and non-remitting pain brought the patient to us. No history of trauma noted. The patient was afebrile on examination. Examination of the scalp showed a solitary, erythematosus, slightly tender,
mycobacterial culture, for evaluation of abscesses alongwith histological examination. All the staining reports were negative and we could only grow mycobacterium in culture.

The patient was screened for HIV/ HBsAg/ HCV and routine hematological examination as per hospital protocol for pre-operative assessment which were within normal limits. Routine urine microscopy was normal. The patient had no history suggestive of immune disorders/ high risk behavior. No additional tests for immunological status assessment were performed considering a reactive Mantoux. Culture for Mycobacterium tuberculosis by BACTEC – 460 Tbsystem (Becton Dickinson, USA) using the 12 B vials, showed growth of M. tuberculosis at the end of 5 weeks. The patient was started on four drug anti-tubercular regime (INH, Rifampicin, Ethambutol and Pyrazinamide, as per RNTCP protocol). Follow-up after one month showed good healing of scar and repeat ESR was 12mm/hr. At a one year follow-up, the patient is doing well with no recurrence of the lesion.

Tuberculous involvement of calvarium is rare as compared to other osseous involvement. The flat bones of skull contain little cancellous bone and hence rarity of the involvement of skull. However, in the skull itself, it occurs more commonly in the frontal and parietal bones[3] which have greater bone marrow than the occipital bone. Trauma[4,5] and tuberculosis of other sites[3] may/may not be associated with skull tuberculosis. Surgical curettage followed by anti-tuberculous drug therapy is the treatment of choice, having good prognosis.

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References


*A Rajesh1, AK Purohit1, V Lakshmi2

Departments of Neurosurgery (AR, AKP), Microbiology (VL), Nizams Institute of Medical Sciences, Hyderabad - 500 082, India

*Corresponding author (email: <drarajesh1306@gmail.com>)
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