Letters to Editor

Diagnosis of Extrapulmonary Tuberculosis by Polymerase Chain Reaction for Mpb64 Gene: An Evaluation in a Hospital Based Study

Sir,
Extrapulmonary tuberculosis (EPTB) often possesses a diagnostic dilemma. Microscopy and culture have proved to be insensitive techniques for diagnosis of EPTB. The present study was conducted to evaluate the role of polymerase chain reaction (PCR) in the early diagnosis of clinically suspected cases of EPTB.

A total of 50 clinical specimens comprising pleural fluid, cerebrospinal fluid, ascitic fluid, fine needle aspiration biopsy, pus and biopsy from clinically suspected EPTB cases were processed and followed by conventional methods and PCR using MPB64 primer.

Tuberculous pleural effusion (68%) was found to be the commonest clinical presentation of EPTB. Overall, PCR could detect EPTB in 62% cases. Microscopy and culture could detect 16% and 20% EPTB cases respectively. PCR was positive in all the tissue samples suggestive of tuberculosis on histopathological examination. Of the 39 EPTB patients who responded to antituberculosis treatment, 31 patients were PCR positive.

PCR using MPB64 had a significant advantage over the conventional methods in diagnosing EPTB cases.

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Seropositivity for Brucellosis in Veterinarians

Sir,

We tested veterinarians and their assistants working at a bull-rearing center and frozen semen facility for Brucella antibodies. Forty persons working at the center were examined physically. Out of these, 9 were veterinarians while the remaining 31 were their assistants. Most of the personnel (25) were asymptomatic. Nine had joint pains (involving knee, interphalangial joints, etc.). Four had fever.

None of them gave history of consumption of raw milk or milk products. All the veterinarians had worked earlier in different veterinary dispensaries and hospitals, and conducted deliveries. Use of gloves and barrier methods was inconsistent among all the personnel involved.

Brucella antibodies were tested by Rose Bengal Plate Test (RBPT) as a screening test for B. abortus as well as for B. melitensis (Veterinary Laboratories Agency, Addlestone, UK). RBPT was negative in all personnel.

PANBIO Brucella IgG and IgM Enzyme Linked Immunosorbant Assay (ELISAs) were performed (PANBIO, Windsor, Brisbane, Australia). Seven out of 40 (17.5%) had anti-Brucella antibodies; IgG was raised in five persons whereas anti-Brucella IgG plus IgM was raised in two. Out of these seven, five were veterinarians.

In veterinarians as a separate entity, Indian workers have reported high seropositivity (14.63%, [1] 25.89% [2]). However, the figures are lower than those found in this study. Five out of nine (55.5%) veterinarians in our study tested positive for Brucella antibodies. Such high seropositivity (46.42%) in veterinarians has been reported from Turkey. [3]

In the absence of history of consuming unpasteurized dairy products, this high rate can be probably explained by direct exposure to Brucella-infected animals.

In review articles, RBPT is shown to be useful as a screening test and its sensitivity is reported to be as high as >99% but specificity low. [4] This was in comparison with tests such as Standard tube agglutination test (SAT), SAT with 2-mercaptoethanol (2ME), and so on. However, these studies have not compared RBPT with ELISA.

In the Turkish study, [3] ELISA detected more seropositives than RBPT. It is reported that in patients with a long history of disease, brucellosis cannot be ruled out based on a negative Rose Bengal test. [5] We may add that in persons with prolonged exposure to animals, brucellosis cannot be ruled out based on negative a Rose Bengal test. Our findings indicate that since ELISA is more sensitive, it should be used for serodiagnosis of brucellosis.

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