Utility of MycoDot test in the diagnosis of cutaneous tuberculosis

Sir,

Mycobacteria are known to have several immunologically active antigenic components like 38 Kd antigen, 30 Kd antigen, 16 Kd antigen, A60 antigen and lipoarabinomannan (LAM).[1] The MycoDot test is a new simple, rapid (20 minutes) and reliable serodiagnostic technique that can detect anti-mycobacterial antibodies in the serum or blood. It offers a low cost, single visit aid in the diagnosis of tuberculosis, with good sensitivity and excellent specificity.

The MycoDot test employs lipoarabinomannan (LAM) antigen which is bound to plastic combs. When the combs are incubated in diluted serum/blood, specific anti-LAM antibodies from the sample, if present, bind to the antigen. The sensitivity of the test is calibrated so that only cases of active mycobacterial diseases such as tuberculosis will generate a colored spot, which is as strong as or stronger than the weakest positive spot on the reference comb that is provided as a guide to interpret results. Healthy infected and/or BCG vaccinated individuals react negatively.

We studied the utility of the MycoDot test in cutaneous tuberculosis by using it to screen the sera of 22 randomly selected patients with cutaneous tuberculosis from 117 cases of cutaneous tuberculosis for the presence of anti-mycobacterial antibodies. All the patients were subjected to routine laboratory investigations and skin biopsy, which revealed epithelioid granulomas. All cases were negative for AFB both in tissue smears and in culture. Of the 22 cases 7 had scrofuloderma, 4 lupus vulgaris, 8 tuberculosis verrucosa cutis, 2 had combination of tuberculosis verrucosa cutis and lupus vulgaris and one patient had erythema nodosum suspected to be due to tuberculosis. All our patients responded well to standard anti-tuberculous treatment.

Out of a total of 22 specimens, the sera from 9 patients tested positive, i.e. 40.8% positivity. The efficacy of the test was 47.8%, and the sensitivity was 43.4%. The negative predictive value was only 7.1%. Hence a positive test is of significance while a negative result does not necessarily rule out tuberculosis.

In Mexico the sensitivity of an ELISA test for IgG antibody to LAM used for the serodiagnosis of tuberculosis was 75% in patients with tuberculosis.[2] ELISA with LAM was also used to detect IgG in the cerebrospinal fluid of patients with tuberculous meningitis.[3] The positivity was 85% and the sensitivity and specificity were 26-81% and 92-100% respectively.

In primary tuberculosis, progression is accompanied by an increase of the antibody titer and healing by a decrease. In secondary tuberculosis, the IgG antibody levels do not return to normal in a fraction of patients. The presence of antibodies merely indicates a past or present mycobacterial infection. However, it has been reported that the presence of antibodies of the IgG type requires the presence of antigen, in the form of active tuberculosis.[4] Hence seropositivity indicates that the disease process is still active in these patients, in the form of antigens being liberated from degenerating bacilli.

Serodiagnosis is not a substitute for clinical examination and histopathology, but only an adjunct in the diagnosis of cutaneous tuberculosis. However, serodiagnosis by the Mycodot test is not adequately sensitive to be useful for screening patients for cutaneous tuberculosis.

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Urticaria due to inhalant allergens

Sir,

The cause of urticaria often remains unknown. Rarely, inhalant allergens have been found to be responsible.[1-3] Inhalation of the nicotine in tobacco[4] or zinc fumes[5] have been reported as the cause of the urticaria. We report a patient with urticaria whose lesions cleared completely in 72 hours whenever she wore a face mask or nasal filter.

A 33-year-old lady presented with urticarial lesions occurring since 6 months. The urticarial wheals used to occur daily, at any time and used to completely resolve within 12 hours. She denied any history of fasting or going out of the city. The urticaria used to clear with pheniramine maleate.

She was advised to wear the facial mask for 48 hours, which she continued wearing for 72 hours. All the urticarial lesions cleared during the next 3 days. She remained all right even without a face mask for another 2 days, when she again started getting similar wheals. At this juncture she was given a nasal filter, which led to the clearance of urticaria completely during the next 3-4 days.

Complete disappearance of urticarial lesions on wearing a facial mask or nasal filter in 3 days without any treatment suggests that the urticaria was due to inhalant antigens. Recurrence of urticaria within 2 days of removal of a facial mask further confirms that the urticaria was due to some inhalant antigen.

One should suspect inhalant allergens as a possible cause of urticaria in a case of prolonged duration which recurs in particular seasons, improves on a change of place (especially on going to hill stations) and recurs on coming back. This can be confirmed if the urticaria disappears or improves if the patient wears a simple face mask for 46 hours. A nasal filter is the right device to be recommended in such situations since it is able to filter all inhalant antigens.

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Topical lincomycin gel in acne vulgaris

Sir,

I read with interest the article by Sharma et al on lincomycin gel.[1] I would like to offer some comments.

The study concludes that lincomycin gel is a safe and effective treatment option for mild to moderate acne vulgaris but it does not even touch upon a more important aspect, i.e. whether it is safer or more effective than other available and accepted treatments for acne vulgaris.

Clindamycin is a synthetic derivative of the antibiotic lincomycin which is isolated from *Streptomyces* species.[2] Clindamycin is accepted as a topical treatment for acne