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Comparison of quantiferon gold and Mantoux test in adults with serpiginous-like choroiditis in northern India

People with ocular tuberculosis can develop anterior, intermediate and posterior uveitis. The posterior uveitis may mimic serpiginous choroiditis. However, all patients with serpiginous-like choroiditis are not due to tuberculosis. It is difficult to isolate *Mycobacterium tuberculosis* from ocular tissues. Few studies have used Mantoux or quantiferon gold test alone to make a diagnosis of presumed ocular tuberculosis and the results of these tests have been used as evidence to start antitubercular therapy.[1,2] Mantoux and quantiferon gold tests indicate latent and/or active tubercular infection. The available commercial tests cannot differentiate between latent or active tuberculosis.[3] In India, apart from Mantoux, Quantiferon Gold test has also been used to detect latent tuberculosis in suspected cases of tubercular uveitis.[4] However, perspectives vary on the utility of this test in countries such as India.[5]

We analysed the importance of positive Mantoux and quantiferon gold tests in the clinical setting. The results of these tests in 50 patients with serpiginous uveitis seen at our uveitis clinic were analysed. Any use of steroids prior to the testing was noted. We calculated the kappa value to evaluate the amount of agreement between the two tests.

Thirty (60%) patients were quantiferon gold-positive and 28 (56%) were Mantoux-positive; 19 patients (38%) were positive for both tests (κ=0.18). This shows poor agreement between the tests. Overall, 39 (78%) patients tested positive with either the Mantoux or quantiferon gold test and 11 (22%) were negative with either of the two tests. Twenty-one patients had used steroids prior to Mantoux and quantiferon gold testing. Of these 21 patients, Mantoux test was positive in 5 (24%) and quantiferon gold test was positive in 9 (43%) patients. Five patients were found to have lesions compatible with tuberculosis on computerized tomography of the chest and were started on antitubercular therapy (ATT). Of the patients who were started on ATT, 3 were Mantoux-positive and all 5 were positive on quantiferon gold test. Thus, overall 10% (5/50) of patients were found to have evidence of active systemic tuberculosis.

We found a high rate (55%–60%) of positivity of Mantoux or quantiferon gold test in cases of serpiginous choroiditis. Such high rates of Mantoux positivity in the Indian population have been shown in other studies.[6] The use of steroids can affect the results of Mantoux and quantiferon gold tests. In our study, 21 patients were on steroids. Thus, the actual incidence of positivity of these tests if done in treatment-naïve cases may be even higher. The agreement between the two tests was also found to be low. Thus, in a clinical setting it may not be correct to correlate the result of these two tests.

Clinicians initiating ATT in cases of serpiginous choroiditis based only on the results of these tests run the risk of over-treating a number of patients. Also, the clinician is in a dilemma if one of these tests is positive and the other one is negative.

Whether treatment should be initiated in cases of latent tuberculosis in an area endemic for tuberculosis is a matter of debate.[7]

Considering the high positivity rate of these tests in patients with serpiginous choroiditis and the evidence in the literature which suggests caution in interpretation of the results of Mantoux and quantiferon gold tests in areas endemic for tuberculosis, we would not recommend making a diagnosis of presumed ocular tuberculosis only on the basis of these tests.

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