Students' Corner
Letter to the Editor

An optimum diagnostic test for amoebic liver abscess in endemic areas: are we there yet?

Madam, Entamoeba histolytica, a protozoan parasite, causes a spectrum of diseases in man. The most common extra-intestinal manifestation of amoebiasis is liver abscess.[1] This entity can cause significant morbidity and mortality particularly when the abscess ruptures into cavities such as pleura, peritoneum, pericardium or organs such as the stomach. Amoebic liver abscess (ALA) is mainly concentrated in the developing countries because of factors such as poor public health, sanitation and personal hygiene.[2]

In view of the mortality that can be incurred from the complications associated with ALA, prompt diagnosis and treatment is of utmost importance in improving the survival of patients.[2] Apart from meticulous history and detailed physical examination, imaging and serologic testing are generally included in the investigative work-up of a patient suspected to have ALA. However, imaging modalities are limited by lack of specificity for ALA. This places a higher reliance on serologic tests such as indirect haemagglutination assay (IHA).

However, physicians must be mindful of a few considerations while interpreting the results of IHA. Some patients may not exhibit an antibody response in acute settings because the testing may have been done too early in the natural course of the disease. While elevation of IHA titres has been reported to have a high sensitivity in non-endemic settings,[3] a similar elevation occurring in an endemic area should be cautiously interpreted because of the possibility of high background seropositivity which can result from prior symptomatic or asymptomatic amoebic infections. In a longitudinal study on patients with ALA in an endemic area, all patients remained seropositive by IHA testing even after 6 months of initial presentation.[4] This underscores the limitation of using an IHA assay in an endemic area for the diagnosis of amoebiasis in individuals with incipient or recurrent infections. However, IHA continues to be widely used due to the simplicity and relatively inexpensive nature of the test.

More recently, there has been an increased propensity towards the use of alternative methods for diagnosing ALA. Techniques such as polymerase chain reaction (PCR) and enzyme linked immunosorbent assay (ELISA) have been employed. However, it is clear that these remain research tools at best and consistency in results is yet to be demonstrated across the board. Moreover, the technical complexity and cost maybe prohibitive in endemic areas; many of which are developing countries without advanced biomedical infrastructures.[5]

Thus, the pursuit for an optimal non-invasive diagnostic test for ALA in endemic settings continues. Despite the estimated magnitude of the disease burden globally, amoebiasis has remained a neglected tropical parasitosis. A change in the outlook towards this disease is important. Resources and funding for research from the developed world will be instrumental in finding an optimum diagnostic modality for the developing world.

Taimur Saleem, Umair Khalid, Madiha Rabbani
Class of 2009, Medical College, Aga Khan University, Karachi.

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