

Evaluation of diagnostic indices of lectin antigen and anti-lectin antibodies in amebic liver abscess

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Diagnostic indices of Gal/Gal NAc lectin antigen and anti-lectin antibodies in liver abscess pus, plasma, saliva and urine for amebic liver abscess (ALA) were evaluated to see their usefulness. Forty (40) clinically suspected hospitalized patients of liver abscess were included. Liver abscess pus from all cases were tested for small subunit of ribosomal RNA (rRNA) gene of *Entamoeba histolytica* by real time PCR and only PCR-positive cases (39) were considered as confirmed ALA patients. Except liver abscess pus, all other samples were also tested for 20 patients suffering from diseases other than liver abscess, who served as controls for the study. The rate of detection of lectin antigen and anti-lectin antibody in liver abscess pus was 12.82% and 56.41% respectively. Diagnostic sensitivities of lectin antigen in plasma, saliva and urine were 15.38% (95%CI 6-31%), 07.69% (95%CI 2-22%) and 00% respectively, while sensitivities of anti-lectin antibodies in all those samples were 100% (95%CI 88-100%), 87.17% (95%CI 72-95%) and 56.41% (95%CI 40-78%) respectively. Diagnostic specificities of lectin antigen was 100% for all specimens but for anti-lectin antibodies, specificities were 100% (95%CI 88-100%) in plasma, 50% (95%CI 28-78%) in saliva and 70% (95%CI 46-87%) in urine. Overwhelming majority (94.87%) of patients received metronidazole for variable period before sample collection, which was correlated with low rate of antigen detection. Detection of lectin antigen for ALA has very limited or no role where metronidazole is used indiscriminately but detection of anti-lectin antibodies especially in plasma (100% sensitivity) and saliva (87.17% sensitivity) are excellent to satisfactory.

Biography

Md. Abdus Salam has completed his MBBS in 1987 from the Institute of Postgraduate Medicine & Research, Dhaka University, Bangladesh, Master of Science in Medical Genetics with Immunology in 1996 from Brunel University, UK, and Master of Philosophy in Medical Microbiology in 2006 from Rajshahi University, Bangladesh with excellent records. He has been teaching Medical Microbiology & Immunology for 16 years to students of both undergraduate and graduate medical programs and published 54 articles in reputed national & international peer-reviewed medical journals. Currently, he is the member of the editorial board of Pak J Med Sci, an International peer-reviewed journal.

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