

Novel Nanomagnetic Beads Based- Latex Agglutination Assay for Rapid Diagnosis of Human Schistosomiasis Haematobium

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Abstract : The objective of the present study was to evaluate the novel nanomagnetic beads based-latex agglutination assay (NMB-LAT) as a simple test for diagnosis of *S. haematobium* as well as standardize the novel nanomagnetic beads based -ELISA (NMB-ELISA). According to urine examination this study included 85 *S. haematobium* infected patients, 30 other parasites infected patients and 25 negative control samples. The sensitivity of novel NMB-LAT was 82.4% versus 96.5% and 88.2% for NMB-ELISA and currently used sandwich ELISA respectively. The specificity of NMB-LAT was 83.6% versus 96.3% and 87.3% for NMB-ELISA and currently used sandwich ELISA respectively. In conclusion, the novel NMB-ELISA is a valuable applicable diagnostic technique for diagnosis of human schistosomiasis haematobium. The novel NMB-ELISA assay is a suitable applicable diagnostic method in field survey especially when followed by ELISA as a confirmatory test in query false negative results. Trials are required to increase the sensitivity and specificity of NMB-ELISA assay.

Keywords : diagnosis, latex agglutination, nanomagnetic beads, sandwich ELISA

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