ABSTRACT

Connective tissue disorders (CTD) are a group of systemic auto immune diseases characterized by the presence of antinuclear antibodies. Detection of these antinuclear antibodies is widely used as a screening test. The most commonly used method for ANA testing is ANA immunofluorescence assay (ANA-IIF). This study compared the diagnostic performance of Enzyme linked immuno sorbent assay (ELISA) with IFA for the detection of ANA. 90 samples were collected from clinically diagnosed and suspected CTD patients. Of the 90 test samples, ANA was detected in 9 males (28.12%); 20 females (34.5%). IIF was positive in 7 males (7.9%); 19 females (21.1%). ELISA was positive in 5 males (5.5%); 15 females (16.7%). Discrepancies noted between 12 samples; 3 positive by ELISA were negative in IIF assay whereas IIF showed fluorescent patterns in 9 sera that were negative in ELISA report.

Comparing with the gold standard IFA, the HEp-2 substrate the sensitivity and specificity of ELISA were 65% and 95% respectively. The positive predictive value was 87% and the negative predictive value was 85%.

The McNemar p value is not significant indicating IFAT gold standard is better.

There is Kappa agreement between the two methods is 65%.

ANA by ELISA is less sensitive than IIF using the HEp-2 substrate.

KEYWORDS: Connective tissue disorders Autoimmune diseases, Antinuclear Antibody, Immunofluorescence, ELISA