Diagnostics and biomarkers

PO - (8409) - SERUM HYALURONIC ACID: A POTENTIAL DIAGNOSTIC MARKER FOR SCHISTOSOMAL PERIPORTAL FIBROSIS IN SCHISTOSOMA MANSONI ENDEMIC AREAS.

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Background: Schistosoma mansoni induced infection is one of the most prevalent infections worldwide with a significant public health and economic outcomes. Morbidity and mortality associated with S. mansoni is mainly the result of periportal fibrosis (PPF) which can be diagnosed using ultrasonography. As ultrasound equipment is not readily available in S. mansoni endemic areas, serum markers like hyaluronic acid (HA) have been used as an alternative means of diagnosing PPF. Methods: A cross sectional study was conducted with the aim of determining the importance of serum HA as a marker for schistosomal PPF in in 55 patients found in S. mansoni endemic areas in Northeastern Ethiopia and 20 non-endemic controls. PPF was determined using portable ultrasound equipment and graded according to the ‘Niamey protocol’. Serum HA concentration was determined using commercially available ELISA kit. Results: The mean concentration of HA in the sera of the cases was significantly higher than the controls (p<0.001). The concentration of HA also increased significantly as the pattern of PPF became severe while serum HA concentration positively correlated with PPF scores (r=0.6438, p<0.001). HA concentration of 27.9 µg/liter of serum differentiated moderate cases of PPF from advanced cases with a sensitivity, specificity, positive predictive value and negative predictive value of 85.71%, 75.61%, 60.5 %, 93.9%, respectively (p<0.001). In conclusion, serum HA concentrations could be used as a potential marker for schistosomal PPF and to assess its severity in patients found in S. mansoni endemic areas. Conclusion: Based on our results, serum HA concentrations could be used as an alternative, non-invasive potential marker for schistosomal PPF and to assess its severity in patients found in S. mansoni endemic areas.