

P032 Biochemical evaluation of hepatocellular dysfunction and extracellular matrix alteration in mice infected with *Schistosoma mansoni*.

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Background Several studies have reported hepatic pathology in human schistosomal infection in broader perspectives to be mediated by dynamic changes in the components of extracellular matrix and hepatocellular enzymes. However, data on specific time associated changes in the levels of these components in mansoni schistosomiasis for intervention strategy remain grossly inadequate. This study was conducted to determine effects on *S. mansoni* infection on liver proteoglycan, collagen and collagenase levels in mice. Liver transaminase and superoxidisedis-mutase activities were also determined.

Method Mice (5 -6 wk old) were intraperitoneally infected with 25 and 100 cercarias of *S. mansoni* and monitored for 30 days with sampling at days 0, 6, 15 and 22 respectively. Control mice were administered 0.2 mL PBS used as the vehicle. Changes in proteoglycan and collagen components of ECM were determined by uronic acid and hydroxyproline quantitation. Collagenase activity was measured based on homogenate hydrolysis of collagenic agar medium. Levels of alanine and aspartate transaminases and superoxide dismutase were determined spectrophotometrically. **Results** The uronic acid and hydroxy proline contents of the infected mice were observed to increase by 16 - 82% and 24 - 140% of the control throughout the postinfection (pi) period with collagenase eliciting significant reduction ($P < 0.05$) only at 6 h and 6 and 15h pi in 25 and 100 cercaria mice respectively. While the hydroxyl proline content declined from 22 day pi coupled with significant collagenase-hydroxyproline association ($r = -0.57 - 0.81$) in both infected groups, persistent elevation which became non-significant ($P > 0.05$) at 22 day pi was observed for uronic acid in the 100 cercaria group. Liver transaminase and SOD activity was also raised by 28 - 105% of control ($P < 0.05$) by day 22 pi. **Conclusion** *S. mansoni* evokes alterations in ECM composition involving collagenase -collagen interaction with magnitude dependent on the intensity of infection in mice