

## **Can aspartate aminotransferase to platelet ratio index replace liver biopsy in chronic hepatitis C**

### *ABSTRACT*

**Background and aim:** We aimed to evaluate the accuracy of readily available laboratory tests (ALT, AST, platelet count, AST to platelet ratio index: APRI) in predicting liver fibrosis in chronic hepatitis C, in comparison to the predictive accuracy obtained by liver biopsy.

**Methods:** One hundred and thirteen patients suffering from chronic hepatitis C (CHC) were included in this study. They included 76 children enrolled from the Pediatric Hepatology Unit and 37 adults enrolled from the Hepatology Unit of Tropical Medicine Department, Cairo University, Egypt. Fibrosis results obtained from liver biopsy were assigned a score from 0 to 4 score as per Metavir scoring. Results of serum ALT and AST levels were expressed as ratio of the upper limit of normal (ULN).

**Results:** Of the pediatric patients, 28 (36.8%) showed no evidence of fibrosis on liver biopsy, 26 (34.2%) showed grade 1 fibrosis, and 22 (29%) had grade 2 fibrosis. Among the adult patients, 12 (32.4%) had grade 2 fibrosis and 25 patients (67.6%) had grades 3 to 4 fibrosis. There was a lack of correlation between the degree of fibrosis and AST levels, AST/ALT ratio, platelet count and APRI. The AUROC curve for predicting significant fibrosis was 0.5 for AST levels, 0.37 for AST/ALT ratio and 0.49 for APRI, in pediatric patients ( $p > 0.05$ ). In adult patients the AUROC curve for predicting significant fibrosis was 0.59 for AST levels, 0.76 for AST/ALT ratio and 0.63 for APRI ( $p > 0.05$ ).

**Conclusion:** Liver biopsy remains the gold standard to assess the extent of hepatic fibrosis in patients with CHC.