assessment [HOMA]) and post-load insulin sensitivity (by the oral glucose insulin sensitivity [OGIS] index) was assessed, together with the features of the metabolic syndrome according to IDF, 2005. Data were correlated with hepatic histopathology.
Results: The prevalence of basal insulin resistance (HOMA-IR values >75th percentile of normal) was 24.8% in nonobese diabetic patients and 59.6% in obese NAFLD, but it increased to 29.2 and 68.4% when measured by post-load insulin resistance (OGIS < 25th percentile). In a multivariate model, after adjustment for age, gender and body mass index, OGIS was a predictor of severe fibrosis in nonobese and obese NAFLD patients, independently of steatosis. An OGIS value below the cut-off of the 25th percentile increased the likelihood ratio of severe fibrosis by a factor of 1.5–2 and proved to be a more sensitive and generally more specific test than HOMA-IR for the identification of subjects with severe fibrosis both in obese NAFLD and in nonobese diabetic patients.
Conclusions: Post-load insulin resistance (OGIS < 9.8 mg/kg/min) is associated with severe hepatic fibrosis in both obese NAFLD and nonobese diabetic patients, and may help identify subjects at risk of progressive disease.

1013 IS ACANTHOSIS NIGRICANS A USEFUL CLINICAL SCREENING TEST FOR NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD) IN RESOURCE POOR SETTINGS?

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Background: Acanthosis nigricans (AN) is an easily detectable papillomatosis and hyperkeratosis of the skin associated with insulin resistance. Insulin resistance is widely accepted as the underlying cause of Non-Alcoholic Fatty Liver Disease (NAFLD). Ultrasonography is the currently accepted tool to screen for NAFLD in the community, but is expensive and needs expertise.
Objectives: To investigate whether AN would be an useful screening test for NAFLD in an adult Sri Lankan population.
Methods: This study was part of a community based investigation – Ragama Health Study (RHS). The study population consisted of 35–64 year old adults, selected using stratified random sampling. Consenting adults were screened by a structured interview, clinical examination, liver ultrasound and collection of 10 ml venous blood. NAFLD was diagnosed based on established ultrasound criteria for fatty liver, safe alcohol consumption and absence of serum markers for Hepatitis B and C. AN was identified by the presence of dark, thick, velvety skin in the neck, body folds and creases.
Results: 3012 subjects participated in the study. AN was present significantly more frequently among NAFLD patients than normal individuals in both males (37.9% vs. 4.8%, $p < 0.001$) and females (39.8% vs. 5.8%, $p < 0.001$). The sensitivity, specificity, and positive predictive value of AN for NAFLD was 37.9%, 95.2%, 78.0% for males and 39.8%, 94.2%, and 81.3% for females respectively.
Conclusion: AN is significantly more common in NAFLD than normal individuals. Although AN has a high specificity, it is not an useful test to screen for NAFLD in the community.

1014 RETINOL-BINDING PROTEIN 4: A PROMISING CIRCULATING MARKER OF LIVER DAMAGE IN CHILDREN WITH NONALCOHOLIC FATTY LIVER DISEASE

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Background and Aims: Non-alcoholic fatty liver disease (NAFLD) has become the most frequent chronic liver disease in children and adolescents in industrialized countries. The early identification of NAFLD in pediatric subjects is highly needed in order to prevent the development of advanced liver disease both in childhood and adulthood. We tested the serum levels of retinol-binding protein 4 (RBP4), a newly described adipocytokine, to assess their associations with the metabolic profile and histological features in a large well-characterized group of children with NAFLD.
Methods: A total of 59 children with biopsy proven NAFLD (38 male 21 female), mean age of 10.8±2.3 seen at Bambino Gesù Children's Hospital from June 2007 to April 2008 were included in the study. Histology was assessed by an experienced hepatopathologist and the NAFLD activity score (NAS) and fibrosis score were calculated for each patient. RBP4 levels were measured by a specific ELISA assay. Anthropometrics, blood pressure, and metabolic profile including fasting glucose, insulin, and lipid panel were done in all patients.
Results: Our data demonstrated that decreasing levels of RBP4 were significantly associated to increasing serum triglyceride levels. On the other hand, high RBP4 levels were significantly associated to low necro-inflammatory activity, low NAS and fibrosis score. Furthermore, serum RBP4 levels were found to significantly decrease with increasing disease severity with a stepwise decrease from children with steatosis (3.8 mg/dl) to borderline nonalcoholic steatohepatitis (NASH) (2.9 mg/dl) to definitive NASH (1.9 mg/dl) ($p < 0.0001$). This association remained significant in multivariable logistic regression analyses.
Conclusions: Our results show for the first time that blood RBP4 levels is a potential marker of disease severity in children with NAFLD. The precise mechanisms resulting in decrease serum RBP4 in pediatric NAFLD cannot be elucidated by this study and will require future investigation. However, our findings may have significant implications for both development of pediatric NAFLD biomarkers as well as novel targets for therapeutic intervention.

1015 DYSMETABOLIC HEPATIC IRON OVERLOAD SYNDROME: ANALYSIS OF HEPCIDIN RESPONSE TO ACUTE ORAL IRON AND CHRONIC IRON OVERLOAD

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Background and Aims: Dysmetabolic Hepatic Iron Overload Syndrome (DHIOS) is the most frequent iron disorder but its pathogenesis is still unclear. Hepcidin is the key inhibitory regulator of iron homeostasis. A blunted response of hepcidin to oral iron has been recently described in HFE-hemochromatosis (HH). Our aim is to explore hepcidin response to oral iron and the effect of iron overload and depletion on hepcidin levels in patients with DHIOS.
Methods: We analyzed urinary hepcidin at baseline and 24 hours after a single 65 mg dose of oral iron in 24 DHIOS patients at diagnosis. Iron overload was established by liver biopsy. Fifteen of them were also studied after iron depletion. Data were compared to those of 34 HFE-HH patients