

PREVALENCE AND CORRELATION OF NON ALCOHOLIC FATTY LIVER DISEASE WITH SERUM ALANINE AMINOTRANSFERASE LEVELS IN OBESE INDIAN CHILDREN



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INTRODUCTION

Non-alcoholic fatty liver disease (NAFLD) is the asymptomatic involvement of the liver due to fatty infiltration of hepatocytes seen commonly in obese children. Elevated serum alanine aminotransferase level (ALT) serves as a surrogate marker of non alcoholic fatty liver disease. NAFLD may progress to chronic liver disease if not detected early. Recently new normative standards are proposed for ALT concentrations (≤ 25 U/L for boys and ≤ 22 U/L for girls), because the studies showed that pediatric liver biopsy specimens from patients with normal or mildly elevated ALT (≥ 26 to 50 U/L for boys and ≥ 23 to 44 U/L for girls) had significant histologic abnormalities, including advanced fibrosis.

OBJECTIVES

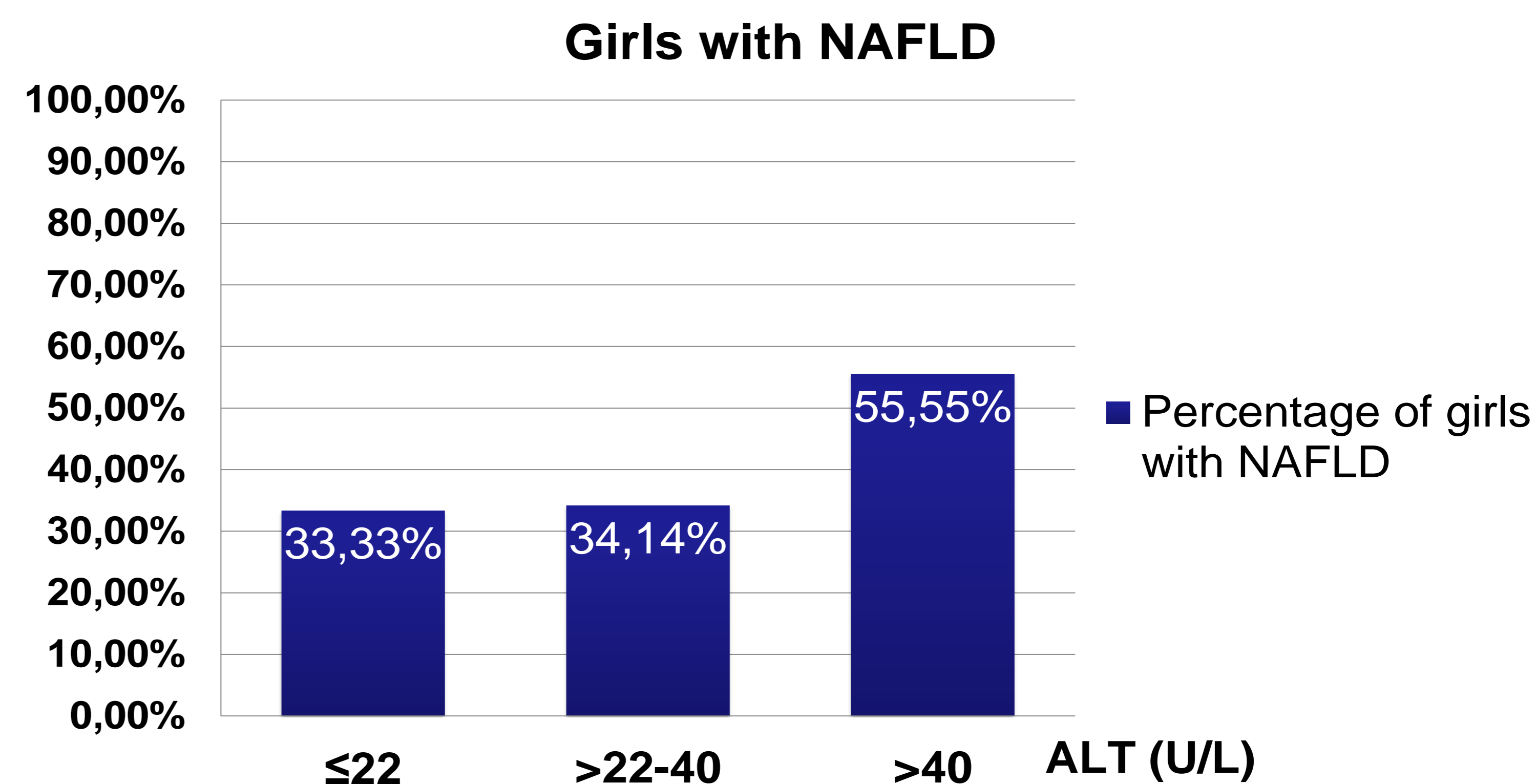
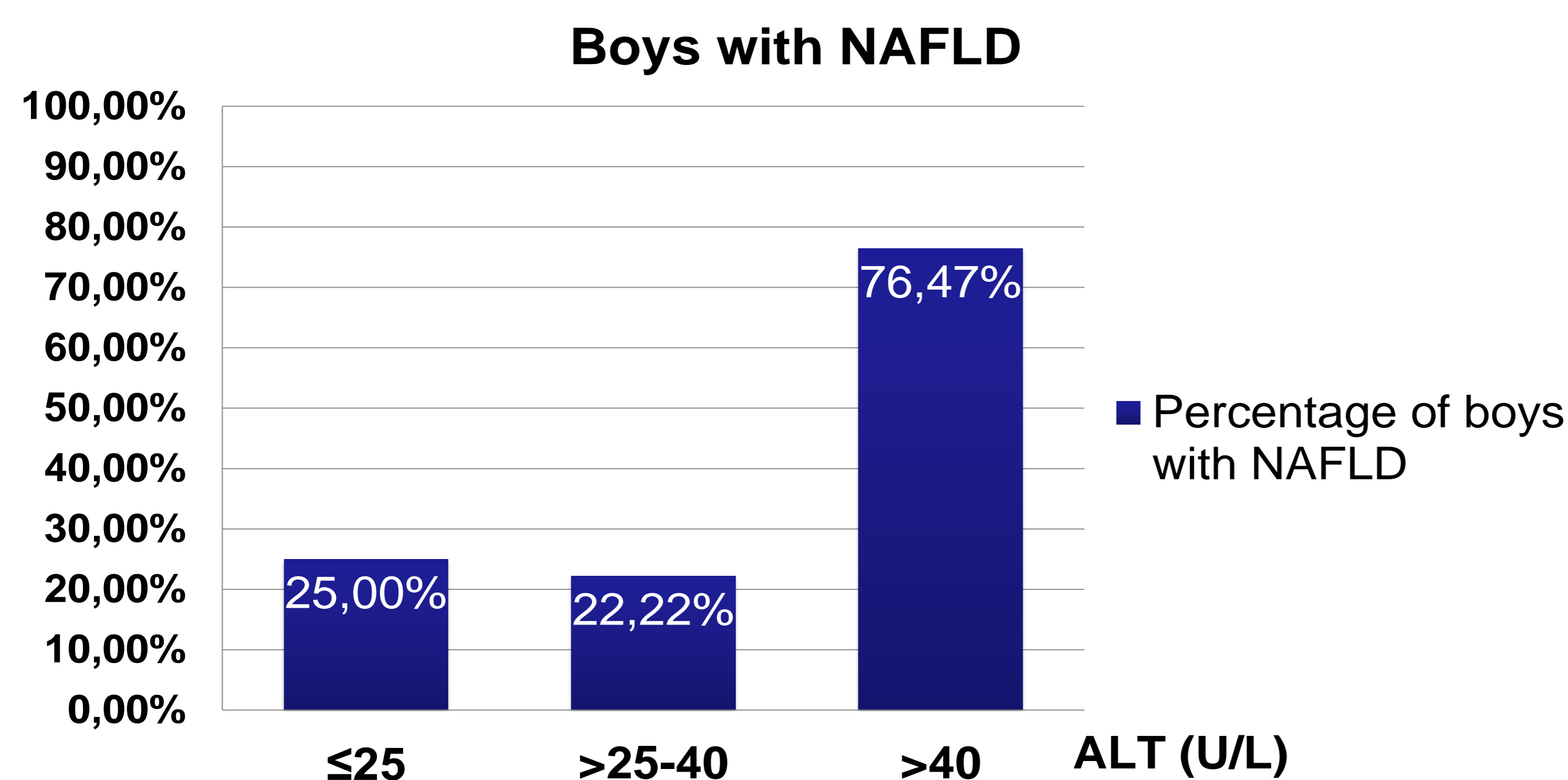
To determine the prevalence of nonalcoholic fatty liver disease among obese children in our population, determine the prevalence of abnormal liver enzymes in obese children and correlation between raised ALT and NAFLD in obese children.

METHODS

In this retrospective analytical study, 223 healthy obese children aged 1-18 years were examined. ALT, fasting lipid profile, fasting blood glucose, HbA1C were measured in all the subjects. NAFLD was diagnosed by abdominal ultrasound. The recommended ALT cut-offs for screening NAFLD in obese boys and girls are 22 and 25 respectively. Since the Indian population is genetically predisposed race for dyslipidemia, NAFLD and metabolic syndrome, hence abdominal ultrasound was done in all obese children.

RESULTS

The prevalence of NAFLD in our study group is **40.8%**.



- Percentage of children with dyslipidemia who were found to have NAFLD is given in the table below:

ALT (U/L)	≤ 22	>22-40	> 40
Girls	73.33%	42.85%	85%

ALT (U/L)	≤ 25	>25-40	>40
Boys	70%	33.33%	84.61%

CONCLUSION

All children with dyslipidemia should be evaluated for NAFLD irrespective of the ALT levels. Significant number of children have NAFLD even with ALT values below the recommended screening cut-off. A larger study is required in our population to test these values for the presence and absence of NAFLD.

Bibliography

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