Acid steatocrit is not helpful in cystic fibrosis patients with mild or no steatorrhea

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The applicability of acid steatocrit (AS) in the assessment of fecal fat losses has been assessed with contradictory results. In the present study, we have aimed to determine the role of AS in in CF patients with mild (<10g/d) or no steatorrhea. Material & methods: The study comprised 45 CF patients aged 7 to 18 years. In all subjects fecal fat concentration (FFC) and excretion (FFE) in day stool collection was assessed as well as AS values in a single stool sample were determined. Results: 130 triple results (FFC, FFE, AS) were available for the analysis. The range of values (mean±SEM) of FFC, FFE and AS were as follow: 0.8–9.9g/day (4.2; 4.9±0.2), 0.7–30.6 g/g (4.0; 6.2±1.0) and 4.0–35.0% (10.0; 13±1.0). AS correlated both with FFE (r = 0.203, p < 0.021) and FFC values (r = 0.224, p < 0.001). The correlations, although statistically significant, were very weak. The specificity and sensitivity of AS in the determination of abnormal FFC were low: 59.2% and 54.0% for the cut-off level of 10% and 31.5% and 84.2% for the cut-off level of 20%. Similarly, low PPV and NPV values were observed (47.8% and 65.1% for a lower cut-off level and 58.6% and 63.4% for a higher cut-off level).

Conclusions: Acid steatocrit does not reflect fecal fat excretion in cystic fibrosis patients with mild or no steatorrhea. Moreover, its applicability in the assessment of fecal fat concentration in this subgroup of patients has no practical value. Supported by: Grant from The Poznan University of Medical Sciences.

Adiponectin may reflect the degree of the inflammatory, fibrosing process in the cystic fibrosis liver

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Steatosis and an inflammatory, reactive-fibrosing process lead to focal and multilobular biliary cirrhosis in cystic fibrosis (CF). Serum adiponectin (AD) is elevated in CF patients.

Aim: To investigate any correlation between the degree of liver involvement and serum AD.

Methods: Hepatic ultrasound was performed in 21 CF patients and 10 controls. Liver involvement was demonstrated in 12 CF patients, who underwent percutaneous liver biopsy with the biopsy needle directed to the site of the lesion with CT scan. The grading scale of CF-related liver histology was: 1 = normal, 2 = steatosis, 3 = steatosis + inflammatory reaction, 4 = inflammatory reaction + fibrosis (focal biliary cirrhosis) and 5 = multilobular biliary cirrhosis. Five groups were studied: Group A = Controls (10, mean age 13.50 yrs); Group B = CF patients having no liver disease (9, mean age 20 years); Group C = CF patients – grade 2 or 3; Group D = 4 CF patients – grade 4, and Group E = 4 CF patients – grade 5. The mean age of CF-LD patients was 14.50 yrs.

Results: AD was significantly different (p = 0.005) between CF patients having liver involvement (mean AD 10.59 μg/ml) and those having normal liver (mean AD 7.36 μg/ml) as well as controls (mean AD 5.61 μg/ml). Furthermore, significant correlation was demonstrated (one way ANOVA, p = 0.009) between the grading of liver involvement and AD (control = 5.61, grade 1 = 7.36, grade 2+3 = 7.41, grade 4 = 8.38, grade 5 = 15.49 (μg/ml).

Conclusion: Adiponectin measurement may be a screening test for the assessment of the degree of the inflammatory, reactive fibrosing process in the liver of CF patients.