Introduction

• Non-invasive biomarkers are being explored for use in the diagnosis and interval assessment of patients with Inflammatory Bowel Disease (IBD).

• Previous studies have demonstrated that serum anti-Saccharomyces cerevisiae antibodies (ASCA) can be measured in 40-60% of adult and pediatric patients with Crohn's disease (CD).

• Elevated serum ASCA titers are found in less than 5% of patients with ulcerative colitis (UC).

• Antibodies are secreted into the gastrointestinal tract via biliary excretion or receptor mediated transport.

• The development of reliable and validated surrogate markers of intestinal inflammation will minimize the need for invasive, uncomfortable, and costly procedures for use in evaluating pediatric and adult patients suspected of having IBD.

Methods

• The study population included 104 subjects (72 male and 32 female) ages 2-18 years (mean = 12.9 years).

• 87 Subjects had CD, and 17 had UC.

• 16 healthy pediatric controls also provided samples.

• Patients were identified and recruited from ambulatory clinics, the endoscopy suite, and inpatient units.

• Fecal samples were collected at the time of enrollment or sent by overnight courier. Matched serum samples were collected at the next clinical blood draw.

• Fecal samples were diluted 1:10 and analyzed using a qualitative ASCA ELISA immunoassay ASCA-CHEK® (TechLab, Blacksburg, VA). A spectrophotometer using an optical density of 450 nm was employed and results ≥ 0.150 were considered positive.

• All results were reported blinded to a subject's diagnosis.

Study Design

• Inpatient Criteria
  - Pediatric patients (age 218 years of age) with an existing diagnosis of Crohn's disease
  - Newly presenting pediatric patients with a clinical history that suggests a diagnosis of IBD

• Exclusion Criteria
  - Hepatitis B, C, or HIV
  - Recent documented enteric infection

Hypothesis

• Measurement of fecal IgG and IgA ASCA antibody levels are useful in the assessment of pediatric patients with symptoms of IBD.

Goals

• Assess for the presence of elevated fecal ASCA titers in pediatric patients with known CD or suspected IBD.