Clinical, Imaging, and Endoscopic Outcomes of Children Newly Diagnosed With Crohn's Disease

Status: RECRUITING

Eligibility Criteria

Sex: ALL
Age: 6 years to 17 years old
Healthy Volunteers: This study is NOT accepting healthy volunteers
Phase 1 Inclusion Criteria

1. Age ≥ 6 years and < 18 years at enrollment
2. Suspected diagnosis of CD
3. Stool culture if performed that is negative for routine enteric pathogens (Salmonella, Shigella, Campylobacter, E. coli 0157:H7) and Clostridium difficile toxin in patients presenting with diarrhea. If history of C. difficile then a minimum of 6 weeks duration from treatment start and negative repeat stool for C. difficile toxin.
4. Parent/guardian consent and patient assent
5. Ability to remain in follow-up for up to 6 months of initial observation followed by a minimum of 52 weeks after possible start of anti-TNF therapy

Phase 1 Exclusion Criteria

1. Diagnosis of CD following abdominal resectional surgery/appendectomy at initial presentation
2. Investigator judgment that patient has high likelihood (>50%) of needing bowel resection within 3 months of diagnosis (i.e., presentation with perforation, bowel obstruction from stricture)
3. Use of any oral CS for non-gastrointestinal indication within the four weeks prior to diagnostic assessment and biosampling (e.g., asthma)
4. Use of any investigational drug within the past four weeks prior to diagnostic assessment and sampling
5. Pregnancy
6. Patients with poorly controlled medical conditions (e.g. diabetes, congestive heart failure)
7. Previous treatment with immunomodulators within one year of enrollment or anti-TNF therapy within two years of enrollment for other medical conditions (e.g., juvenile idiopathic arthritis)
8. Previous treatment with non-anti TNF biologics or small molecules for non-IBD indications in the past 6 months, with the exception of dupilumab (Dupixent) for asthma, eczema, or eosinophilic esophagitis
9. Inability to have MRE because of claustrophobia or other reasons

Phase 2 Inclusion Criteria

1. Met all eligibility criteria for Phase 1 and participated in Phase 1
2. Diagnosed with macroscopic CD involving the terminal ileum and/or colon by endoscopic evaluation and/or MRE
3. MRE imaging within 6 weeks of ileocolonoscopy and no more than 4 weeks after starting initial therapy (TT). A limited 'research protocol' MRE is acceptable in participants who have undergone a clinical CTE during their initial diagnostic evaluation; see Manual of Procedures for details.
4. Received at least one of the following as initial therapy upon diagnosis:
    1. Corticosteroids
    2. Immunomodulator
    3. Aminosalicylic acids (5-ASA)
    4. Defined nutritional therapy
    5. Anti-TNF (adalimumab or infliximab)
5. Commenced adalimumab or infliximab anti-TNF therapy guided by ROADMAB™ CDST as first therapy or within 180 days of diagnosis (TD), with or without concomitant immunomodulator

6 a. Had ileal and rectal biopsies, OR b. Ileal biopsies are not obtained secondary to inflammatory or structural changes at the ileocecal valve or distal ileum that prevent ileal intubation. To be acceptable for Phase 2, the following additional criteria must be met: b1. Gross inflammation or obvious narrowing at the IC valve or distal ileum as documented by the video colonoscopy, AND b2. MRE documentation of TI inflammation with or without narrowing, OR c. Ileal biopsies are not obtained secondary to inflammatory or structural changes due to colonic CD.

7. Parent/guardian consent and patient assent 8. Ability to remain in follow-up for a minimum of 52 weeks after start of anti-TNF therapy

Phase 2 Exclusion Criteria

1. Diagnosis of CD using video capsule endoscopy only with normal ileocolonoscopy and normal MRE
2. Orofacial CD only
3. Esophageal, gastric, duodenal, and/or jejunal CD only
4. Severe complex fistulizing perianal disease +/- abscess, or perianal disease requiring surgical intervention or likely to require on-going surgical intervention possibly including diversion. The placement of a seton is not exclusionary. Incision and drainage of a perirectal abscess is also not exclusionary.
5. Perianal CD only with no evidence of luminal disease
6. Internal fistulizing disease at diagnosis
7. Initial IBD treatment with non-anti-TNF biologic or small molecule therapy

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8. Received any anti-TNF agent other than adalimumab or infliximab
9. Investigator judgment that patient unlikely to return for clinical, endoscopic or MRE follow-up
10. Inability to have MRE because of claustrophobia or other reasons
11. Video of baseline endoscopy not available for central reading, unless otherwise approved by the Clinical Coordinating Center (Adequate photo documentation required)
12. Underwent bowel resection within 3 months of diagnosis (TD)

Conditions & Interventions

Interventions:
DRUG: Anti-TNF therapy
Conditions:
Crohn Disease
Keywords:
crohn disease, children, pediatric, anti-TNF therapy, therapeutic drug monitoring, intestinal microbiome, inflammatory bowel disease, gene expression, genomic DNA

More Information

Description:
Crohn's disease (CD) is a condition that causes inflammation (swelling, redness) of the lining and wall of the small intestine, large intestine, or both. CD may be associated with abdominal cramps/pain, diarrhea, blood in the stool, weight loss, or delayed growth in children. While the exact cause of CD is not certain it is thought that the immune system located in the intestine reacts abnormally to the large number of bacteria contained there. The investigators think that diet, exposure to antibiotics early in life, and having a family history of CD puts people at increased risk for developing CD. In order to decrease the inflammation doctors use what is called biologic therapy with anti-TNF molecules that can be given through an intravenous or shots. TNF is a chemical made by white blood cells that is involved in inflammation. When this type of treatment is given early after diagnosis it is more effective than when it is given later. The investigators have learned that it is important to give the optimum (ideal) amount of this medicine guided by certain blood tests. The investigators also know that not everyone responds to this therapy but do not understand the reasons for this variability between people. The CAMEO study has been started to help understand what factors are important in determining whether a child with CD completely heals the inflammation after anti-TNF therapy. The investigators will do that by measuring certain markers of inflammation in the blood and stool and by looking at a person's genes (DNA) and how inflammation is controlled in the intestine. These inflammation tests will be done before, during, and after one year of anti-TNF therapy. The investigators will determine how much healing has taken place by comparing the results of the colonoscopy and a special type of MRI that are both done before anti-TNF and then again one year later. The goal in treating CD is to heal both the lining and the wall of the intestine. Children ages 6-17 years who are thought to have CD and are about to undergo their diagnostic colonoscopy are eligible to be enrolled. If they are found to indeed have CD and start an anti-TNF medicine within 6 months they can continue in the study. There are no increased risks of participating in this study beyond those normally associated with having CD and its treatment. By better understanding why the bowel does or does not heal, doctors will be better able to provide personalized care.

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