

## Crohn's Disease in Pediatric Patients

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### DESCRIPTION

Crohn's disease is a chronic inflammatory illness of the digestive system. It has the potential to affect any part of our digestive tract, from your mouth to anus. However, it often affects the small intestine and the beginning of the large intestine.

Crohn's disease is an Inflammatory Bowel Disease (IBD) that affects the intestines. Other frequent forms of IBD include ulcerative colitis and microscopic colitis. Approximately 20-30% of all Crohn's disease patients appear while they are under the age of 20. In addition to the typical GI symptoms, children with Crohn disease often experience growth failure, malnutrition, pubertal delay, and bone demineralization

#### Etiology

Crohn's disease has an unknown etiology. Crohn's disease is most likely a hereditary disease that produces an unusual immune response in the gastrointestinal tract.

People who have a family member with Crohn's disease are more prone to get it themselves.

### Symptoms

Malabsorption is common in children with Crohn's disease of the small intestine, which includes the following symptoms

- Diarrhea
- Abdominal pain
- Growth slowed
- Weight loss
- Anorexia

### Risk factors

Other complications of Crohn's disease include:

- Intestinal obstruction, a blockage in the intestine;
- Fistulas, abnormal connections between two parts of the body;
- Abscesses, pus-filled pockets of infection;
- Anal fissures, small tears in your anus that may cause itching, pain, or bleeding;

- Ulcers, open sores in your mouth, intestines, anus, or perineum;
- Inflammation in other areas of your body, such as your joints, eyes, and skin

### Diagnosis

The following laboratory results for Crohn's disease are nonspecific:

- The CBC may reveal hypochromic microcytic anaemia caused by iron shortage from GI blood loss, or normocytic anaemia caused by chronic illness.
- Acute-phase reactants (ESR and CRP) values are frequently increased in Crohn's disease patients but may be normal.
- Hypoalbuminemia is common
- Other common deficiencies include iron and micronutrients (eg, folic acid, vitamin B-12, serum iron, total iron binding capacity, calcium, and magnesium)
- Stool tests should be done to rule out bacterial or parasite infection

### Imaging studies

- To examine the small intestine, which cannot be accessed during endoscopy, a single-contrast upper GI radiologic series with Small-Bowel Follow-Through (SBFT) can be employed.
- Magnetic Resonance Enterography (MRE) and Computed Tomography Enterography (CTE) are equally sensitive and specific as SBFT in detecting small bowel inflammation and may be more accurate in detecting extraenteric consequences such as fistulae and abscesses.
- MRI is very effective in assessing pelvic and perianal disease.
- Abdominal Ultrasonography (US) can be performed to rule out gallbladder and kidney stones as well as explore intestinal illness.

### Endoscopy

- Colonoscopy with several colonic and terminal ileal biopsies is considered as a routine diagnostic technique.

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- Upper endoscopy, also known as Esophagogastroduodenoendoscopy, should be part of the first examination.
- Video capsule endoscopy is increasingly being used to screen children for Crohn's disease in the small bowel.

## Management

The following are the general therapy goals for children with Crohn's disease:

- To obtain the greatest clinical, laboratory, and histologic management of the inflammatory illness while minimising drug side effects
- To promote development with appropriate nutrition
- Allowing the patient to function as normally as possible (eg, in terms of school attendance and participation in activities)

## Step-up approach

- Patients with mild disease are treated with 5-aminosalicylic acid preparations, antibiotics, and nutritional therapy.
- If no response occurs or if the disease is more severe than initially thought, corticosteroid and immunomodulatory therapy with 6-mercaptopurine or methotrexate is attempted
- Infliximab is effective in patients who have an inadequate response to conventional therapy and in patients who have fistulizing Crohn disease
- Adalimumab is a safe and effective substitute for patients who are allergic to infliximab or develop high titers of human antichimeric antibodies
- Surgery is considered when medicinal treatment fails.