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Endoscopy Gastrointestinal Medicine Nutrition

The Centre for GI Health

CROHN'S DISEASE

Crohn's disease is a chronic inflammatory condition of the gastrointestinal tract. Understanding Crohn's disease can help you navigate the uncertainty that comes with a new diagnosis.

Crohn's disease belongs to a group of conditions known as inflammatory bowel diseases, or IBD. It is named after Dr. Burrill B. Crohn, who first described the disease in 1932 along with his colleagues, Dr. Leon Ginzburg and Dr. Gordon D. Oppenheimer.

WHO IS AFFECTED?

Crohn's disease affects an estimated 1 in 330 or about 40 000 thousand Australians. Men are affected slightly less than women. The disease can occur at any age but is most often diagnosed in adolescents and adults between the ages of 20 and 30 years.

Studies have shown that between 1.5 per cent and 28 per cent of people with either Crohn's disease or a related condition Ulcerative colitis have a first degree relative, such as a parent, child, or sibling with one of the diseases. Even though there is a genetic component associated with an increased risk of IBD, it is impossible to predict who may get Crohn's disease based on family history.

Crohn's disease can affect people from all ethnic backgrounds. The disease is more common in Caucasians, though the rates of Crohn's disease have increased among Asians also in recent years.

Disease management is adversely affected by smoking.

MANIFESTATIONS

Crohn's Disease can affect any part of the GI tract from the mouth to the anus, but most commonly affects the end of the small bowel (ileum) and the beginning of the colon.

The condition typically affects the entire thickness of the bowel wall rather than superficial layers which is the case for ulcerative colitis. Inflammation of the intestine can "skip," or leave normal areas in between patches of diseased intestine

ULCERATIVE COLITIS

By contrast, it only affects the colon, also called the large intestine and involves the innermost lining of the colon.

Inflammation of the intestine does not "skip" regions as is the case in Crohn's disease although some variants of Ulcerative colitis sometimes called indeterminate colitis may have a patchy distribution.

TYPES OF CROHN'S DISEASE

01 ILEOCOLITIS

This is the most common form of Crohn's disease. It affects the end of the small intestine, known as the terminal ileum, and the large intestine also called the colon but may be associated with inflammation in other parts of the GI tract from the mouth to the anus also.
Symptoms may include:

- Diarrhoea and cramping
- Pain in the middle or lower right part of the abdomen
- Significant weight loss

02 ILEITIS

This type of Crohn's affects only the ileum.
Symptoms are generally the same as for Ileocolitis. In severe cases, complications may include fistulas or inflammatory abscesses in the right lower quadrant of the abdomen.

03 GASTRODUODENAL CROHN'S DISEASE

This type affects the stomach and the beginning of the small intestine, called the duodenum.
Symptoms may include:

- Nausea
- Vomiting
- Loss of appetite
- Weight loss

04 JEJUNOILEITIS

This type is characterised by patchy areas of inflammation in the upper half of the small intestine called the jejunum.
Symptoms may include:

- Mild to intense abdominal pain and cramps following meals
- Diarrhea
- Fistulas may form in severe cases or after prolonged periods of inflammation

05 CROHN'S (GRANULOMA TOUS) COLITIS SURGERY

This type affects only the colon, also known as the large intestine.
Symptoms may include:

- Diarrhoea
- Rectal bleeding
- Disease around the anus, including abscess, fistulas and ulcers
- Skin lesions and joint pains are more common in this form of Crohn's than in others

06 CROHN'S VS. ULCERATIVE COLITIS

Crohn's disease and Ulcerative colitis share similar symptoms and they are both types of inflammatory bowel disease (IBD), but they are not the same illness, and they affect different areas of the GI tract. Crohn's disease can affect any part of the GI tract from the mouth to the anus and also the entire thickness of the bowel wall whereas ulcerative colitis involves only the colon and rectum (also known as the large intestine) and affects the innermost lining of the large intestine.

DIAGNOSIS

The initial diagnostic workup for Crohn's disease consists of a complete history and physical examination, assessment of signs and symptoms, laboratory tests and endoscopy.

Specific testing may include the following:

- A complete blood count done to check for anaemia and other alteration in blood cell counts
- Electrolyte studies and kidney function tests are done, as chronic diarrhea may be associated with low potassium and magnesium levels and kidney injury
- Iron and Vitamin B12 assay (B12 absorption msg be affected in Crohn's disease involving the ileum
- Liver function tests performed to screen for associated liver inflammation and protein levels
- Imaging such as x-ray, CT, MRI or ultrasound scan
- Stool culture and Clostridioides difficile stool assay to rule out infectious colitis
- Stool analysis for faecal calprotectin which is elevated in inflammatory conditions affecting the colon, and is useful in distinguishing irritable bowel syndrome (noninflammatory) from a flare in inflammatory bowel disease. Faecal calprotectin is 88% sensitive and 79% specific for the diagnosis of inflammatory colitis. If the faecal calprotectin is low, the likelihood of inflammatory bowel disease is less than 1 per cent. Lactoferrin is an additional nonspecific marker of intestinal inflammation.
- Inflammatory markers, such as erythrocyte sedimentation rate or C-reactive protein
- Colonic and Ileal endoscopy to evaluate the intestinal inflammation directly and provide tissue samples called biopsies for specific microscopic examination.

TREATMENT

Management of Crohn's disease may be quite complex including a choice of several different types of medications including:

- Antibiotics including particularly the use of Metronidazole (Flagyl) which has special beneficial effects in this disease
- 5 Aminosalicylic agents (more effective in ulcerative colitis than Crohn's)-these drugs reduce colonic inflammation and help control symptoms. Patients may be prescribed pills to swallow or an enema or suppository to put in the rectum
- Steroids - If aminosalicylates don't work or patients symptoms are severe, a treating doctor may prescribe these anti-inflammatory drugs for a short time
- Immunomodulators - these help reduce the immune system's attack on the colon. These medications may take some time to take effect. Patients may not notice any changes in symptom control for up to 3 months upon their commencement
- Biologic therapies - these are made from proteins in living cells instead of chemicals. They are for people with moderate to severe Crohn's disease.
- Surgery- which may include local resection of the diseased small or large intestine, removal of the entire large intestine and the fashioning of an ileostomy bag in severe and extensive cases and the drainage of perianal infections
- Dietary review-although no specific diet is advised for Crohn's disease modification of fibre intake and adherence to a low FODMAP diet may assist in symptom control
- Mindfulness and meditation

The medications listed need careful and thorough discussion with your doctor as a variety of important side effects are described with each agent listed.

COMPLICATIONS

Complications of Crohn's disease may include:

- Bleeding. This could result in the development of anaemia
- Osteoporosis. Where ones bones become weak after the use of large quantities of corticosteroids
- Dehydration requiring intravenous fluid support
- Extra intestinal inflammation that may affect joints, skin, or eyes
- Vitamin B12 deficiency resulting from impaired absorption when ileal inflammation is present
- Development of oxalate kidney stones in the setting of ileal disease
- Infections that may occur internally or around the anus and perineum
- Liver disease. Both the bile ducts and the liver sometimes become inflamed in association with Crohn's disease. Specific therapies are required in such instances
- Colon and small intestinal cancer. A small increased risk only is associated with long-term chronic disease

PROGNOSIS

For most patients Crohn's disease is a chronic, or long-term, a condition characterised by flares and periods where few symptoms are noted (remissions).

Modern medications have brought significant improvement to patient management. However, up to 75% of patients with Crohn's disease may need for surgical intervention for complications at some point in their life.