WHAT IS IBD?

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Inflammatory bowel disease (IBD) comprises a group of chronic conditions that cause inflammation in the lining of the digestive tract and affects over 2.2 million people in Europe (five million worldwide).[1] Crohn's disease (CD) and ulcerative colitis (UC) are the most common forms of IBD.[2] Some patients have features of both of these diseases and are given a diagnosis of indeterminate colitis.

IBD has been linked to a Westernised environment and lifestyle, with its incidence increasing dramatically over the past 50 years in developed countries. The highest prevalence of disease is seen in populations in North America and Northern Europe; however, a slow and steady increase in prevalence is now being described in the developing world as well, making IBD a global disease.[3, 4]

Combined Incidence and Prevalence of Crohn's Disease

IBD has been increasing since the mid-twentieth century and is linked to a Westernised lifestyle.

People with IBD experience episodes of diarrhoea, abdominal cramps and pain, bleeding from the rectum, weight loss, fever and fatigue. Furthermore, ongoing intestinal inflammation leads to progressive damage to the digestive tract, often requiring surgery and resulting in serious and life-threatening complications.

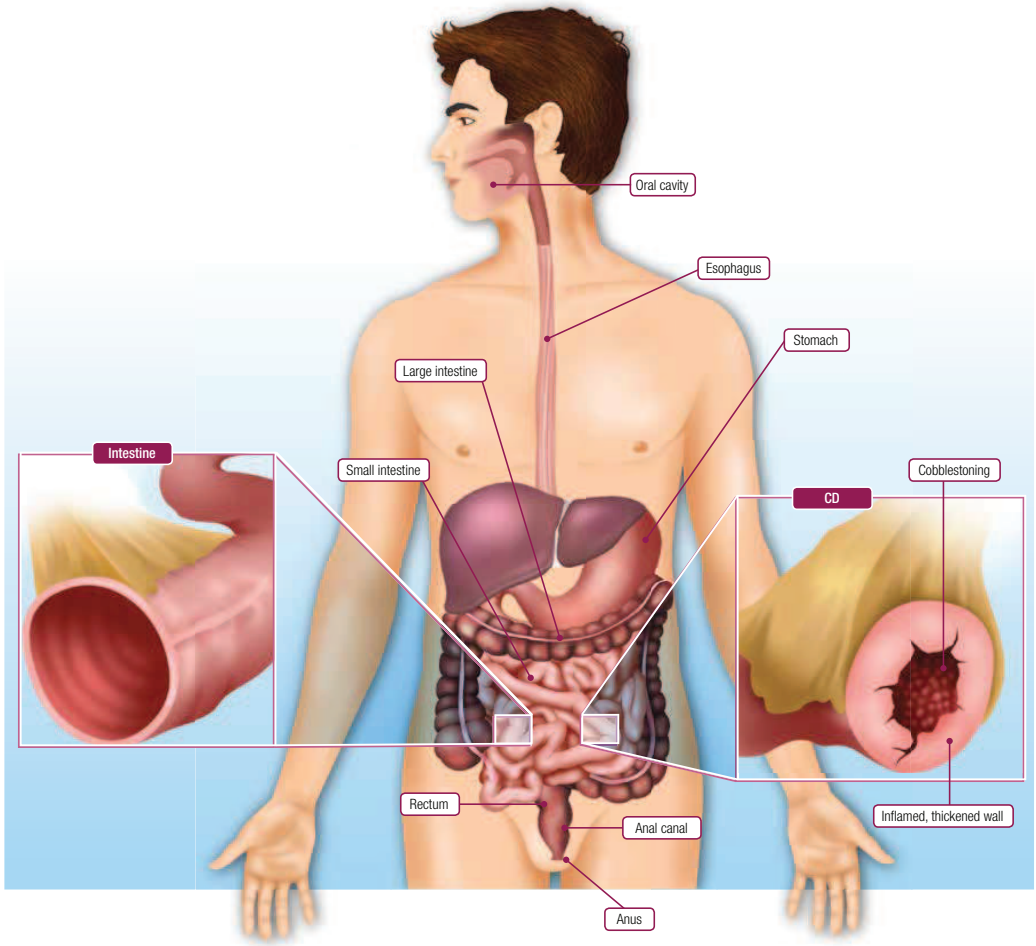
IBD is a debilitating disease that can have a detrimental impact on quality of life and ability to work. It runs a waxing and waning course in terms of symptom severity: when inflammation is severe, the patient experiences a flare-up of symptoms; however, when inflammation is minimal or absent, the patient is symptomless and is considered to be in remission.

IBD symptoms can have a detrimental impact on quality of life.

While the exact cause of IBD is not clear, it is thought to involve an inappropriate immune reaction by the body against food and normal bacteria in the digestive tract.[5] People who develop IBD are likely to have a genetic makeup that makes them more susceptible to environmental or microbial factors that can trigger the disease.

IBD is incurable at present; however, patients can receive medical treatment that aims to suppress the abnormal inflammatory response and heal the lining of the digestive tract. This induces and maintains resolution of symptoms, allowing patients to achieve long-term remission.

Although there is no cure for IBD, its symptoms and impact on a patient's life can be minimized by appropriate medical management.

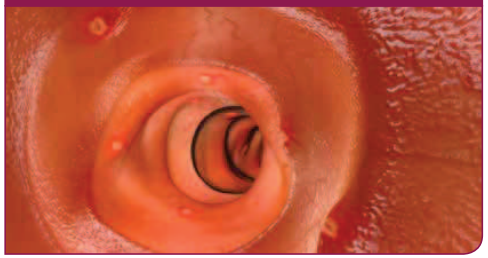


ABOUT CROHN'S DISEASE

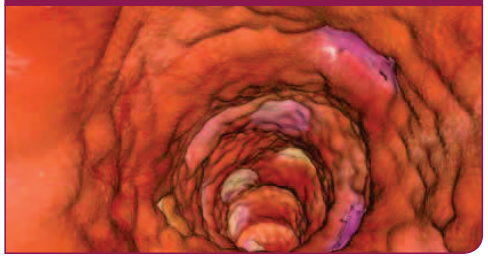
AETIOLOGY AND EPIDEMIOLOGY OF CD

CD is a chronic and progressive form of IBD that **can involve any part of the digestive tract from the mouth to the anus,** although inflammation is most commonly located in the end of the small intestine, the beginning of the large intestine and the anus. Inflammation typically extends through the whole thickness of the intestinal wall. The disease generally begins as a small ulcer originating from erosions in the intestinal lining and then progresses to a spectrum of lesions ranging from small ulcers to large and deep ulcers, lesions in multiple areas and swelling of the intestinal lining.

Primary lesion of Crohn's disease



Deep ulcers in severe disease



CD may present at any stage of life, although it is most commonly diagnosed in people aged between 15 and 29 years, is slightly more common in females than males,[3] and occurs more frequently in urban areas.[6] In every 100,000 people, between 4 and 214 individuals will have CD, with between 0.03 and 16 new cases diagnosed for every 100,000 people each year.[1] Having a first-degree relative with CD or being of Jewish decent increases the likelihood of developing the disease.

CD is most commonly diagnosed in individuals aged between 15 and 29 years.

CAUSES OF CD

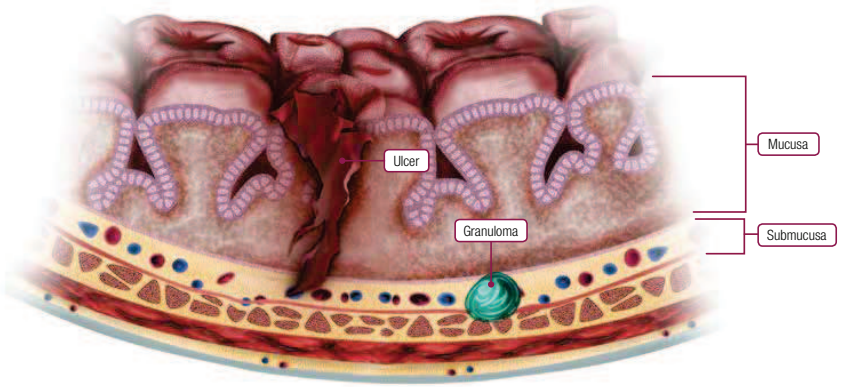
The exact cause of CD is unknown, although it is believed to result from an interaction between environmental factors, genetic factors and intestinal bacteria. This interaction induces an abnormal immune response that compromises the barrier between the digestive contents and the underlying cells, leading to increased absorption of bacterial products into the body, an enhanced immune response, cellular damage and the development of intestinal lesions.

Individuals who smoke have twice the likelihood of developing CD as non-smokers.[7] Antibiotics, oral contraceptives, non-steroidal anti-inflammatory drugs (e.g. ibuprofen), diet (e.g. refined sugar, fat and fast food), infections and childhood hygiene have also been implicated as risk factors for CD, although their exact role is less certain.[8]

Smoking increases the risk of developing CD.

CLINICAL FEATURES OF CD

Common symptoms of CD include abdominal pain (often in the lower right area of the abdomen) and persistent diarrhoea. Other symptoms include weight loss, rectal bleeding, mouth ulcers, poor appetite, fever and night sweats. In addition to these intestinal disease-related symptoms, patients can also experience fatigue, anaemia, malnutrition, inflammation and pain in the joints, skin lesions and swelling of the eye or the liver.[9] If CD develops during childhood, it can delay growth and puberty.



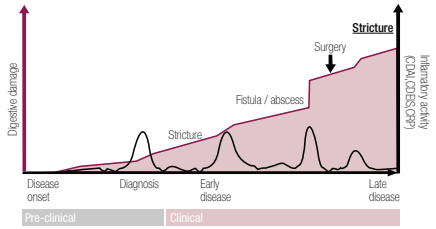
Abdominal pain and persistent diarrhoea are common symptoms of CD.

If untreated, the majority of patients with CD experience periods of active disease (relapses) alternating with periods of less active disease (remission). Recurrent relapses can result in the development of scar tissue or fibrosis. This fibrosis can lead to narrowings of the digestive tract known as strictures or stenoses, which can cause blockages of the bowel and may warrant surgery. In addition, deep ulcers can penetrate through the intestinal lining resulting in abscess formation. If these abscesses occur close to the anus, they can drain to the surface through tracks known as fistulae. Over time, over 50% of patients with CD develop a penetrating or stricturing complication due to uncontrolled inflammation.[10]

CD can cause bowel blockages, deep ulcers and abscesses that drain to the surface.

Surgical resection of bowel is often required to treat strictures, fistulae or abscesses. However, disease can often recur following surgery, leading to a progressive loss of intestinal function and disability.

CD can often recur following surgery.

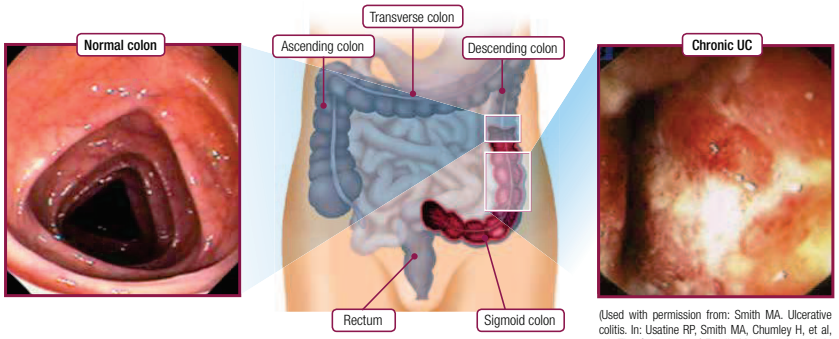


APPROACH TO THE MANAGEMENT OF CD

Conventionally, CD management has focused on treatment of symptomatic disease flares. However, greater understanding of the progressive nature of CD has expanded the focus of treatment beyond symptomatic relief and remission to include healing of the intestinal lining. In selected patients, early intervention with aggressive treatments is considered to prevent irreversible destruction to the intestine and the complications associated with it.[11]

Treatment goals for CD include maintained remission of symptoms together with healing of the intestinal lining.

ABOUT ULCERATIVE COLITIS



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AETIOLOGY AND EPIDEMIOLOGY OF UC

UC is a chronic form of IBD that is generally **limited to the superficial lining of the large intestine (colon) and rectum.** Its extent varies between patients and it may be limited to the last part of the colon (proctitis), the left side of the colon (left-sided colitis) or extend through the colon (extensive-colitis).

UC may present at any stage of life, and although diagnosis is most frequent in younger patients, it can also be diagnosed in those aged between 60 and 80 years. Although UC is less common than CD in children, when diagnosed the disease extent is likely to be extensive. In every 100,000 people, between 8 and 246 individuals will have UC, with between 1 and 20 new cases diagnosed for every 100,000 people each year.[1]

Having a first-degree relative with UC or being of Jewish decent increases the likelihood of developing the disease.

UC is most commonly diagnosed in individuals in their 30s or in their 60s–80s.

CAUSES OF UC

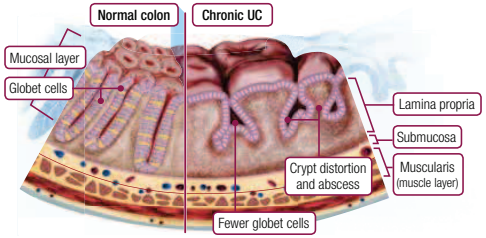
The cause of UC is thought to be similar to that of CD and involve a pathological interaction between environmental factors, genetic factors and intestinal bacteria. This interaction generates production of inflammatory molecules and immune cells that lead to inflammation of the lining of the colon, compromising its structural and functional integrity.[4]

Inflammation of the lining of the digestive tract compromises its structural integrity

While current smoking may actually have a protective effect on the likelihood of developing UC, individuals who have given up smoking also have an increased risk of disease that persists for several decades compared with never smokers.[7] Appendectomy has also been shown to be protective against the development of UC.[2] Other environmental facts that may contribute to risk of developing UC are similar to those implicated in CD.[8]

CLINICAL FEATURES OF UC

The most common symptoms of UC are abdominal discomfort and bloody diarrhoea, with or without mucus. Depending on the extent of the disease and severity of inflammation, other symptoms include rectal bleeding, tenesmus (an urgent need to open the bowels, even if they are empty), weight loss, nausea, loss of appetite, fever and fatigue.[4] Acute complications such as haemorrhage, toxic megacolon and perforation may occur in patients with severe inflammation. Like CD, UC can also cause inflammation in the skin, joints, eyes and liver.



Abdominal discomfort and bloody diarrhoea are common symptoms of UC.

Patients with UC experience flare-ups of symptoms alternating with symptom-free periods. Flare-ups of UC can be sudden and severe and require admission to hospital for intravenous therapies. Patients in whom the disease cannot be controlled may require surgery to remove the colon. Such patients are given a stoma – an artificial opening through the abdominal wall into the intestinal tract that allows emptying of the bowel contents into a bag worn outside the body. This is often a temporary measure and the bowel can later be joined back together with the construction of a reservoir or pouch.

After many years of disease, patients with UC have an increased risk of developing colorectal cancer.[12] This risk is further increased in patients with extensive disease and in those with chronic untreated inflammation.

APPROACH TO THE MANAGEMENT OF UC

The goal of medical therapy for UC is to induce and maintain symptomatic remission. Strategies to manage UC are based on the level of clinical disease activity together with the extent of disease, the course of disease during follow-up and patients' preferences.[4]

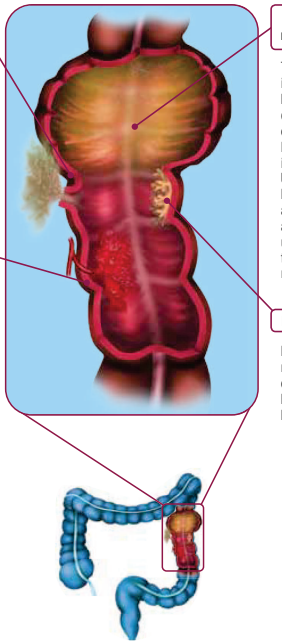
Medical treatment of UC should be tailored for the individual patient.

Perforation

A perforated, or ruptured, colon is the most dangerous intestinal complication of UC.[3] Patients with toxic megacolon are at high risk for perforation.[1]

Hemorrhage

Hemorrhage, or severe bleeding, occurs in 1% of UC patients.[3]



Toxic megacolon

Toxic megacolon is characterized by extreme dilation of the colon. It occurs in 5% of UC patients. Electrolyte abnormalities and narcotic use can trigger toxic megacolon.[3]

Pseudopolyp

Pseudopolyps are not an intestinal complication, but they may be present.

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