

Crohns disease research paper

[Science](#), [Genetics](#)



The gastrointestinal tract, which spans from the mouth to the anus, is a durable yet sensitive system that is susceptible to a variety of disorders that can bring an individual great pain and distress. There are a myriad of gastrointestinal disorders that fall under the category of Inflammatory Bowel Disease (IBD), including Ulcerative Colitis, Irritable Bowel Disease (IBD), and Crohn's disease. Many of these gastrointestinal disorders have similar characteristics, but they are each distinct disorder and should be treated as such.

Etiology of Crohn's Disease

According to a breadth of research into gastrointestinal disease, Crohn's disease appears to be one of the more complex in regards to the causes that contribute to an individual developing the disease. There is thought to be both genetic and environmental factors that increase an individual's likelihood of being a host to inflammatory bowel disease. Additionally, Crohn's disease is thought to be associated with certain immune disorders (Baumgart & Sandborn, 2012), creating a plethora of factors that may contribute to the development of gastrointestinal diseases. Research into the genetic component revealed that if a sibling has been diagnosed with Crohn's disease, there is a 26-fold chance of another sibling being diagnosed with Crohn's disease, with up to a 35% likelihood of developing Crohn's disease among monozygotic twins when one has been diagnosed with the disease (Lapaquette, Brest, Hofman, & Darfeuille-Michaud, 2012). Further genetic research identified the NOD2 gene as being associated with an increased susceptibility to developing Crohn's disease, compared to individuals who do not have the NOD2 gene (Lapaquette, Brest, Hofman, &

Darfeuille-Michaud, 2012). However, according to Mishina, Katsel, Brown, Gilberts, and Greenstein (1996), the exact etiology of Crohn's disease remains unknown. While the exact cause of Crohn's disease appears to be a mystery, research has suggested that there are three factors that need to be present in order for the disease to occur: (1) a precipitating ligand or trigger, (2) the trigger must be transmitted to the host, and (3) there must be a susceptibility on behalf of the host when exposed to the trigger (Mishina, Katsel, Brown, Gilberts, & Greenstein, 1996). The majority of patients with Crohn's disease are diagnosed between the ages of 17 and 40 years (Baumgart & Sandborn, 2012).

Signs and Symptoms of Crohn's Disease

According to the National Institutes of Health (NIH), the symptoms associated with Crohn's disease can be varied in location, depending on where the inflammation occurs within the gastrointestinal tract. Some of the main symptoms include cramps in the abdominal area, fever, fatigue, loss of appetite, pain when evacuating the bowels, loose stools that persist over time, and weight loss (NIH, 2012). Due to the inflammation that is associated with Crohn's disease, the cells within the intestine secrete a large amount of water and salt. Since the colon is not able to absorb the excess fluid, diarrhea is a common symptom experienced by individuals with Crohn's disease. Additionally, the inflammation can contribute to the thickening of portions of the bowel due to a buildup of scar tissue. The thickening can lead to a change in the normal movement of waste through the bowel, which can lead to cramping and discomfort (www. mayoclinic. org). Other symptoms of Crohn's disease include constipation, inflammation of the eyes, pus, mucus,

or stool filled fistulas around the rectal areas, joint pain, mouth ulcers, bleeding from the rectum, and swollen gums.

Medical Treatment for Crohn's Disease

Once diagnosed with Crohn's disease, patients have a variety of options to consider, ranging from self-care to surgery. Patients with Crohn's disease are urged to quit smoking since smoking has been shown to aggravate the disease, leading to an increase in inflammation within the gastrointestinal tract (Baumgart & Sandborn, 2012). Additionally, dietary changes and nutritional deficiencies are also routes of action to pursue, while research suggests that merely addressing the nutritional deficiencies may not be sufficient in the adult patient population (Baumgart & Sandborn, 2012). The variety of drug treatments available has expanded over the past decade, with steroids as the most often used treatment option for fast acting short-term alleviation from symptoms and drugs such as thiopurines or methotrexate for long-term maintenance of symptoms (Baumgart & Sandborn, 2012).

However, due to possible side effects or contraindications, the variety of medication treatment options allow healthcare professionals to select the treatment that is best suited for the individual patient. While the medications may reduce the symptoms associated with Crohn's disease, most of the medications used to treat the disease are also associated with an increased risk of infection, which can sometimes be fatal (Baumgart & Sandborn, 2012). If drug treatment does not appear to be addressing the symptoms being experienced, surgery may be an option. While surgery does not necessarily cure Crohn's disease, it can help to reduce the severity of the

symptoms by removing abscesses and fistulas that contribute to gastrointestinal inflammation and bowel obstruction (Baumgart & Sandborn, 2012).

Caring for a Patient with Crohn's Disease

Some of the key points to remember when caring for a patient diagnosed with Crohn's disease include a careful work-up to rule out a possible differential diagnosis, individualized therapeutic course for the individual patient, education for both the patient and the medical treatment team about the disease as well as the possible risks and complications that can occur, and enrolling the patient in a surveillance program to allow for close follow-up (Baumgart & Sandborn, 2012). Additionally, mental health counseling may be a good topic to address with patients, as they may experience disturbed body image or sexual dysfunction due to either the disease or the treatment for Crohn's disease.

References

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