Approximately 1 million people in the United States have IBD, with 10% of these being children (D'Auria and Kelly, 2013). Over the past 30 years, the incidence of Crohn disease has risen, but the incidence of ulcerative colitis in children has remained stable (Aloi, D'Arcangelo, Pofi, et al, 2013). Both Crohn disease and ulcerative colitis have been noted to be more aggressive if the onset occurs in childhood (Aloi, D'Arcangelo, Pofi, et al, 2013).

Etiology

Despite decades of research, the etiology of IBD is not completely understood, and there is no known cure. There is evidence to indicate a multifactorial etiology. Research is focused on theories of defective immunoregulation of the inflammatory response to bacteria or viruses in the GI tract in individuals with a genetic predisposition (Szigethy, McLafferty, and Goyal, 2011). In Crohn disease the chronic immune process is characterized by a T-helper 1 cytokine profile, whereas in ulcerative colitis the response is more humoral and mediated by T-helper 2 cells; however, recent studies have shown a subset of T cells (Th17) that are critical in inflammation for both forms of IBD (Szigethy, McLafferty, Goyal, 2011). Development of IBD also may have a genetic influence. Family-based genetic studies have linked chromosome 6 in ulcerative colitis with the NOD2 gene in Crohn disease (Szigethy, McLafferty, and Goyal, 2011).

Pathophysiology

The inflammation found with ulcerative colitis is limited to the colon and rectum, with the distal colon and rectum the most severely affected. Inflammation affects the mucosa and submucosa and involves continuous segments along the length of the bowel with varying degrees of ulceration, bleeding, and edema. Thickening of the bowel wall and fibrosis are unusual, but long-standing disease can result in shortening of the colon and strictures. Extraintestinal manifestations are less common in ulcerative colitis than in Crohn disease. Toxic megacolon is the most dangerous form of severe colitis.

The chronic inflammatory process of Crohn disease involves any part of the GI tract from the mouth to the anus but most often