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Ulcerative Colitis Pathology
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Introduction
Ulcerative colitis is an autoimmune disorder that affects the gastrointestinal tract, in particular the colon. It can be defined as intermittent bouts of inflammation within the colon that causes abdominal pain, bloody stools, pus, and diarrhea (Zhang and Li, 2014). The lining of colon becomes irritated and develops ulcers. The cause of the disease is still not entirely clear; however, researchers believe that environment, genetics, intestinal bacteria and the individual’s immune response all play a role in one’s susceptibility to the disease (Zhang and Li, 2014). Ulcerative colitis is included under the umbrella group of inflammatory bowel diseases. This disease can range from moderate to severe symptoms, and can even be fatal.

Pathophysiology
The underlying pathophysiology of ulcerative colitis is inflammation and ulceration of mucosal lining of the colon. The inflammation usually starts within the area of the rectum and progresses through the colon (Harris & Jelemensky, 2014). The cause of ulcerative colitis is still unknown, but researchers believe that immune system abnormalities and genetics play a role. Risk factors such as environmental factors, dietary habits, use of oral contraceptives, and previous infections are also under investigation (Harris & Jelemensky, 2014). Ulcerative colitis is “limited to the mucosal layers, with varying degrees of infiltrates from lymphocytes, plasma cells, and granulocytes” (Feuerstein & Chiefetz, 2014). Many research studies are underway regarding the adaptive and innate immune mechanism involved in ulcerative colitis. Research has found a cytokine, IL-23, which is a key process in the early response to microbes, is found to be altered in patients with ulcerative colitis, further suggesting its role in chronic intestinal inflammation (Zhang & Li, 2014).

Diagnostic Criteria and Testing
Ulcerative colitis is a disease of intermittent flare-ups followed by periods of remission when no signs or symptoms are present. During a flare-up of ulcerative colitis, the signs and symptoms can range from the following:
- Abdominal pain and cramping
- Bloody or pus in the stool
- Diarrhea
- Frequent urgency to have bowel movements
- Tension (Feuerstein & Chiefetz, 2014).
- Other symptoms include nausea, low grade fever, anemia and weight loss as well as extraintestinal symptoms that include joint disorders and arthrits (Harris & Jelemensky, 2014).

Nursing Implications
The nursing role is extremely important in the disease management of patients with ulcerative colitis. Nursing care is aimed at decreasing the severity of symptoms and preventing complications. Medication adherence can frequently be an issue in patients with ulcerative colitis (Harris & Jelemensky, 2014). The definitive diagnosis, laboratory tests can also be obtained to rule out other disorders such as infections caused by toxins, bacteria, viruses or parasites. The definitive diagnosis however, comes from a colonoscopy and biopsy. (Harris & Jelemensky, 2014).

Significance of Pathophysiology
The significance of the pathophysiology of ulcerative colitis is that researchers still do not know the cause of the disease, but it is highly evident that there is an immunologic mechanism. Ulcerative colitis is considered an auto-immune disorder, as the body’s inflammatory system is working in overtime. Many of the treatments are aimed at decreasing inflammation and reducing the body’s immune system. Medications used for these factors include aminosalyclates, corticosteroids, thiopurines, anti-tumor necrosis factor agents, selective adhesion molecule inhibitors and probiotics (Feuerstein & Chiefetz, 2014).

Conclusion
In conclusion, ulcerative colitis is a complicated disease that still has a lot of unknowns. As researchers continue to investigate what may cause the disease, healthcare professionals continue to best manage signs and symptoms as best they can. Many of those with ulcerative colitis fall under the category of having mild to moderate symptoms, with only a small percentage of patients having severe cases of the disease. With this being said, most patients with ulcerative colitis can be medically managed with goals of prolonged periods of remission. Those with severe cases of the disease may opt for surgical management, by removing part or all of colon. Researchers continue to look for reasons that may trigger the body’s immune system to attack itself. It is with great hope that researchers can soon find a cause for this debilitating disease. In hopes that one day healthcare professionals can treat the disease more efficiently and/or prevent it from occurring all together.

References