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IMPORTANCE OF PHARMACIST INTERVENTION IN THE MANAGEMENT OF ULCERATIVE COLITIS- A CASE STUDY

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ABSTRACT: Ulcerative colitis is gaining more prominence these days because of its complications (both local and systemic), impairing the quality of life of patient and increased morbidity and mortality rate. For instance, a case was reviewed which proved the role of clinical pharmacist in the treatment plan and in providing a cost effective therapy. The review of the case resulted in a dosage error and prescribing an unnecessary drug that lead to socioeconomic burden on the patient. Hence changes need to be made where a clinical pharmacist plays a key role in providing a rational therapy and better patient outcome.

INTRODUCTION: Ulcerative colitis is a most common form of inflammatory bowel disease in which the lining of the colon becomes inflamed and develops tiny open sores, or ulcers, that produce pus and mucous. The combination of inflammation and ulceration can cause abdominal discomfort and frequent emptying of the colon. In Japan Ulcerative colitis is 10 times less common than in west Europe [3, 4]. Work in India has suggested that it is more common in young Hindus. It occurs more frequently in Hindus than in Muslims, Christians and Parsis [6.] A significantly increased incidence of ulcerative colitis (four to five times normal) has been observed in Ashkenazi Jews, whereas blacks and Asians have a relatively low incidence of occurrence [7, 8, 9].

Ulcerative colitis incidence ranges from 3 to 15 cases per 100,000 persons per year among the white population, with a prevalence of 80 to 120 per 100,000 persons [10]. Among children however Ulcerative colitis is less prevalent than crohn's disease. A westernized environment and life style is linked to the appearance of inflammatory bowel disease, which is associated with smoking, diet high in fat and sugar, medication use, stress and high economic status [1].

The various etiological factors are infectious agents (viruses, Chlamydia, Mycobacterium, L-forms of bacteria), Genetics (metabolic defects, connective tissue disorders), Environmental factors, Immune defects (Altered host susceptibility, Immune mediated mucosal damage), Psychological factors (Stress, Emotional or physical trauma, Occupation). Smoking is protective for ulcerative colitis [11]. The risk of developing ulcerative colitis in smokers is approximately 40% of that in nonsmokers [7]. The pathogenesis of Ulcerative colitis involves an abnormal response of the own immune system. In general the cells and proteins that are present in the

immune system will protect from being infected. But in case of the patients with Inflammatory bowel disease, the immune system mistakes food, bacteria, and other materials in the intestine for foreign or invading substances, this makes the body to send the white blood cells into the lining of the intestines, where they produce chronic inflammation and ulcerations.

The clinical presentation of Ulcerative colitis include Abdominal cramping, Frequent bowel movements, often with blood in the stool, Weight loss, Fever and tachycardia in severe disease, Blurred vision, eye pain, and photophobia with ocular involvement. Arthritis, mouth sores, skin rashes, and eye inflammation may accompany ulcerative colitis in some individuals. The laboratory findings include Decreased hematocrit/hemoglobin, increased erythrocyte sedimentation rate, Leukocytosis and hypoalbuminemia with severe disease. Other tests, including x-ray tests of the GI tract or computed tomography (CT scan), may be done.

The various treatment options include Medications including aminosalicylates (drugs related to aspirin), steroids, immunosuppressive agents, and other anti-inflammatory medications are often used alone or in combination to reduce injury to the lining of the colon. Removal of the involved part of the colon, called a colectomy, may be required if treatment with medications does not help [2].

Now a days ulcerative colitis cases are seen now and then. Ulcerative colitis is a disease having both systemic and local complications which impacts more on the quality of life of the patient. Sometimes, the complications may be life-threatening where there is a need of more concern and attention. The risk of colonic carcinoma is much greater in ulcerative colitis patients when compared with the general population are greatly reducing the life expectancy, leading to increased morbidity and mortality.

Increased chance of occurance and complications is leading to the path of economic burden to those people affected with this disease and with a low socio economic status. Here is a case we would like to discuss about, which was observed during the ward rounds. Although ulcerative colitis is a disease affecting the people with high economic status, but in this case in contrary it has affected the patient of low economic status.

Case Report: A 35 year old female patient was admitted in the hospital with chief complaints of bloody stools (10episodes/day), abdominal pain from 4 months and loss of appetite are present. The patient had a past attack one and half year back for 3 months associated with bleeding per rectum and fever. She takes mixed diet and her occupation was cooli. Upon general examination gross pallor and facial puffiness are present. Her laboratory tests revealed decreased Hemoglobin levels (5g/dl). Colonic biopsy showed features of Inflammatory Bowel Disease, in Favour of Ulcerative colitis with moderate activity, whereas colonoscopy report confirmed congested mucosa, loss of vascularity, nodules all along colon. The patient was diagnosed as Ulcerative coltis with Gross anemia and her treatment chart includes:

Tab. Prednisolone (40mg,OD); Tab. Loperamide (2m , OD); Inj. Metronidazole (100ml,TID); Inj. Ciprofloxacin (100ml, OD); Tab. Mesalamine (1.2g, OD); T. Iron folic acid (325mg,OD); Inj. Pantoprazole (40mg, OD); packed cell transfusion.

In the above treatment chart Prednisolone, Mesalamaine and Ciprofloxacin are indicated to treat ulcerative colitis. Loperamide was prescribed to treat diarrohea, Iron folic acid was given to treat the anemia. Pantoprazole was prescribed as prophylaxis for stress induced ulcer. Packed cell transfusion was done to (increase the Haemoglobin level) treat anemia.

DISCUSSION: In the above case the unnecessary drug is Metronidazole. Antimicrobial agents, particularly metronidazole, are frequently used in attempts to control Crohn's disease but are not useful in ulcerative colitis [12, 13]. Prescribing an unnecessary drug not only leads to the irrational usage but also increased cost burden to the patient. In Addition it may also lead to the increased incidence of the ADRS. According to the standard treatment the dose of mesalamine is 2-4g per day. Here in this case a low dose was prescribed leading to the sub therapeutic effect. A low dose of drug

produces decreased effect which is of no use to patient. Hence goals should be set such as reducing the signs and symptoms, preventing re occurance and providing a rational therapy to the patient that result in a better outcome. The interventions observed in the above case were informed to the physician and changes were made in the drug therapy for better results.

The increasing prevalence of ulcerative colitis has been reported from Western countries. In India, even the disease is been diagnosed very commonly. To study the disease course and its associated complications from India, a hospital based study registering previously diagnosed and newly diagnosed cases of ulcerative colitis, was carried out for a period of 4 years. The course and severity of the disease and response to treatment was monitored in all patients prospectively. The response to treatment was assessed as complete remission, partial remission, and relapse. Out of a total of 148 registered patients, the authors analyzed 120 patients on regular follow up.

The average duration of symptoms prior to the entry was 2.7 years. Eighty eight (73.34%) had severe disease, 16 (13.34%) had moderate and 16 (13.34%) had mild disease at presentation. One hundred nine (90.84%) patients had episodic disease; none presented with acute fulminant colitis. Twenty one patients (17.5%) developed various complications.

The authors also summarized that Ulcerative colitis was responsible for a hospital admission rate of 12/10,000. Most of the patients presented with severe disease as contrary to the previously reported literature from our country [16].

Intervention Components:
Pharmacists considered medication reconciliation the most important component of the multifaceted intervention, and the most important way for pharmacists to engage in improving care transitions. Taking a complete medication history and reviewing medications with patients not only provided an opportunity to identify and correct errors in the patient's medical record, but also helped avert potential adverse drug events. Positive consequences of conducting detailed medication reconciliation including that it may help clarify medication information for patients, it helps the patient communicate with their physicians about the medications, and improves the efficiency of ordering medications at discharge. Hence, Medication chart review helps find something on there that needs to be changed or clarified.

CONCLUSION: Clinical pharmacists play important role in a variety of health care settings, and their activities appear to benefit individual patients as well as health care organizations in a multitude of ways.[14] Clinical pharmacists are the people who were implemented to reduce the morbidity and mortality associated with the drug related problems. Hence in developing countries like India there is a desire need of clinical pharmacist in monitoring Drug related problems, improving patient care and providing a quality of life to the patient.

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