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Review of clinical presentations in patients with inflammatory bowel disease

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Dedication

This work is dedicated to my amazing family who supported me through out this entire journey and paved the way for me to be able to reach my goals.

It's also dedicated to all the medical personnel who provided us with knowledge, Guidance and who set an example for excellence and dedication for us to follow.

Acknowledgments

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Abstract

Background: Inflammatory bowel disease affects a significant percentage of patients who attend the gastroenterology department. It consists of two types: Ulcerative colitis (UC) which affects the colon and Crohn's disease (CD) which can affect any part of the gastrointestinal tract. Both types share some clinical presentations.

Aim: To identify the most common clinical presentations in patients with inflammatory bowel disease and duration of symptoms before diagnosis at Al Imamein Al kadhemien medical city and to compare the obtained results with other studies.

Method: A retrospective study of 25 patients diagnosed with inflammatory bowel disease and their colonoscopic reports were collected and reviewed from the gastroenterology department during the period of September 2018 to January 2019 at Al Imamein Al kadhimaein medical city.

Results: The majority of inflammatory bowel disease patients were 20 to 29 years at diagnosis. Ulcerative colitis patients' age at diagnosis ranges from 20 to 29, while in Crohn's it ranges from 10 to 19 years.

Females exhibited a higher percentage (52%) in the study compared with males (48%).

(68%) of the cases had ulcerative colitis while (32%) had Crohn's disease.

The most common clinical presentation of inflammatory bowel disease is blood in stool(72%).

The most common clinical presentations in ulcerative colitis is blood in stool found in (88.2%) followed by diarrhea found in (47%) followed by abdominal pain found in (41.1%) while in crohn's abdominal pain is the commonest presentation found in (87.5%) followed by weight loss found in (50%) followed by blood in stool found in (37.5%).

Mean time between onset of symptoms and diagnosis is 6months,with minimum duration is less than a week and maximum duration is 4 years.

Conclusion: Inflammatory bowel disease affects females more frequent than males ,mean age at diagnosis is 37 ,ulcerative colitis is more common than crohns disease ,there is a delay in diagnosis 6monthes after the onset of symptoms , The most common clinial presentations in ulcerative colitis patients is blood in stool,abdominal pain and diarrhea,while In crohns patients abdominal pain and weight loss.

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Chapter one

Introduction

Inflammatory bowel disease (IBD) is an idiopathic disease caused by a dysregulated immune response to host intestinal microflora. Ulcerative colitis (UC) and Crohn's disease (CD) are the two major types of IBD. ⁽¹⁾

Epidemiology

The incidence of inflammatory bowel disease (IBD) varies widely between populations. Crohn's disease appears to be very rare in the developing world ulcerative colitis is becoming more common.

In the West, the incidence of ulcerative colitis is stable at 10–20 per 100 000, with a prevalence of 100–200 per 100 000, while the incidence of Crohn's disease is increasing and is now 5–10 per 100 000, with a prevalence of 50–100 per 100 000. Both diseases most commonly start in young adults, with a second smaller incidence peak in the seventh decade. Approximately 240 000 people are affected by IBD in the UK. ⁽²⁾

Pathophysiology

It is thought that IBD develops because of an abnormal host response to an environmental trigger in genetically susceptible individuals. This causes inflammation of the intestine and release of inflammatory mediators, such as TNF, IL-12 and IL-23, which cause tissue damage. In both diseases the intestinal wall is infiltrated with acute and chronic inflammatory cells.

In Ulcerative colitis Inflammation invariably involves the rectum (proctitis) but can spread to involve the sigmoid colon (proctosigmoiditis) or the whole colon (pancolitis), Inflammation is confluent and is more severe distally.

The inflammatory process is limited to the mucosa and spares the deeper layers of the bowel, Both acute and chronic inflammatory cells infiltrate the lamina propria and the crypts ('cryptitis'). Crypt abscesses are typical. Goblet cells lose their mucus and in long-standing cases glands become distorted.

Dysplasia characterized by heaping of cells within the crypts, nuclear atypia and increased mitotic rate may herald the development of colon cancer.

While Crohn's disease involves any part of GIT system the most commonly involved sites are terminal ileum and right side of colon, The entire wall of the bowel is edematous and thickened, may penetrate through the bowel wall to initiate abscesses or fistulas involving the bowel, bladder, uterus, vagina and skin of the perineum. The mesenteric lymph nodes are enlarged and the mesentery is thickened. Crohn's disease it has a patchy distribution and the inflammatory process is interrupted by islands of normal mucosa. ⁽³⁾

Clinical features

Inflammatory bowel disease symptoms vary, depending on the severity of inflammation and where it occurs. Symptoms may range from mild to severe with periods of active illness followed by periods of remission symptoms include: diarrhea ,abdominal pain ,blood in stool ,reduced appetite ,fatigue and others. ⁽⁴⁾

Physical examination often reveals evidence of weight loss, anemia with glossitis and angular stomatitis,Abdominal tenderness, most marked over the inflamed area. An abdominal mass due to matted loops of thickened bowel or an intra-abdominal abscess may occur. Perianal skin tags, fissures or fistulas are also common.

Dignosis Include tests for anemia, infection ,fecal occult blood test for hidden blood in stool, endoscopy (for Crohn'sdisease) ,colonoscopy and imaging studies, such as contrast radiography, magnetic resonance imaging (MRI), or computed tomography (CT). ⁽⁵⁾

Treatment

The goal of inflammatory bowel disease treatment is to reduce the inflammation that triggers signs and symptoms. This may lead not only to symptom relief but also to long-term remission and reduced risks of complications. It involves either drug therapy or surgery.

Drug therapy includes, Anti-inflammatory drugs are often the first step in the treatment of inflammatory bowel disease, Anti-inflammatories include corticosteroids and aminosalicylates.

Immune system suppressors, Some examples of immunosuppressant drugs include azathioprine, cyclosporine and methotrexate.

One class of drugs called tumor necrosis factor (TNF)-alpha inhibitors, or biologics, works by neutralizing a protein produced by immune system. Examples include infliximab, adalimumab and golimumab.

Antibiotics may be used in addition to other medications or when infection is a concern — in cases of perianal Crohn's disease, for example. Frequently prescribed antibiotics include ciprofloxacin and metronidazole.

Complications

Colon cancer, skin, eye and joint inflammation may occur during IBD flare-ups, primary sclerosing cholangitis, thrombosis, toxic megacolon and perforation also medication side effects because certain medications for IBD are associated with a small risk of developing certain cancers, Corticosteroids can be associated with a risk of osteoporosis, high blood pressure and other conditions. ⁽⁴⁾

Chapter two

Aim and Method

Aim of study

To identify the most common clinical presentations in patients with inflammatory bowel disease and duration of symptoms at Al Imamein Al kadhemiin medical city and to compare the obtained results with other studies.

Method

A retrospective study of 25 patients diagnosed with inflammatory bowel disease and their colonoscopic reports were collected and reviewed from endoscopic unit during the period of september 2018 to January 2019 at Alimammein Al kadhimaain medical city, the following variables were included in the study:

Age

Gender

Type of inflammatory bowel disease

Clinial presentations

Duration of symptoms

Chapter three

Results

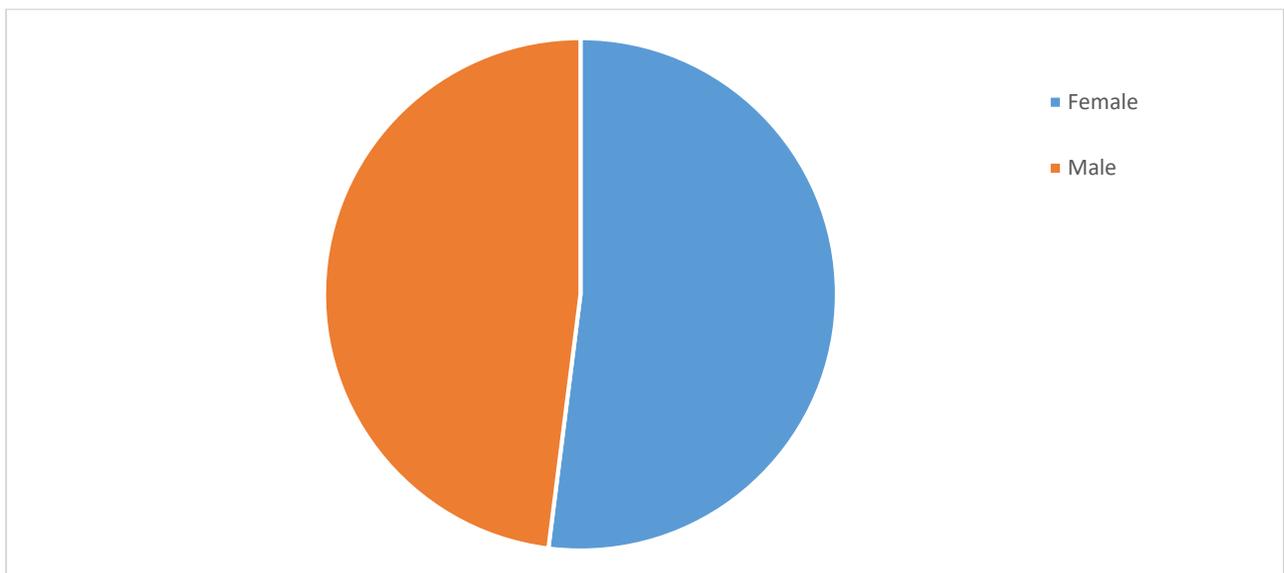
Results

25 patients reports were assessed and their results shown below.

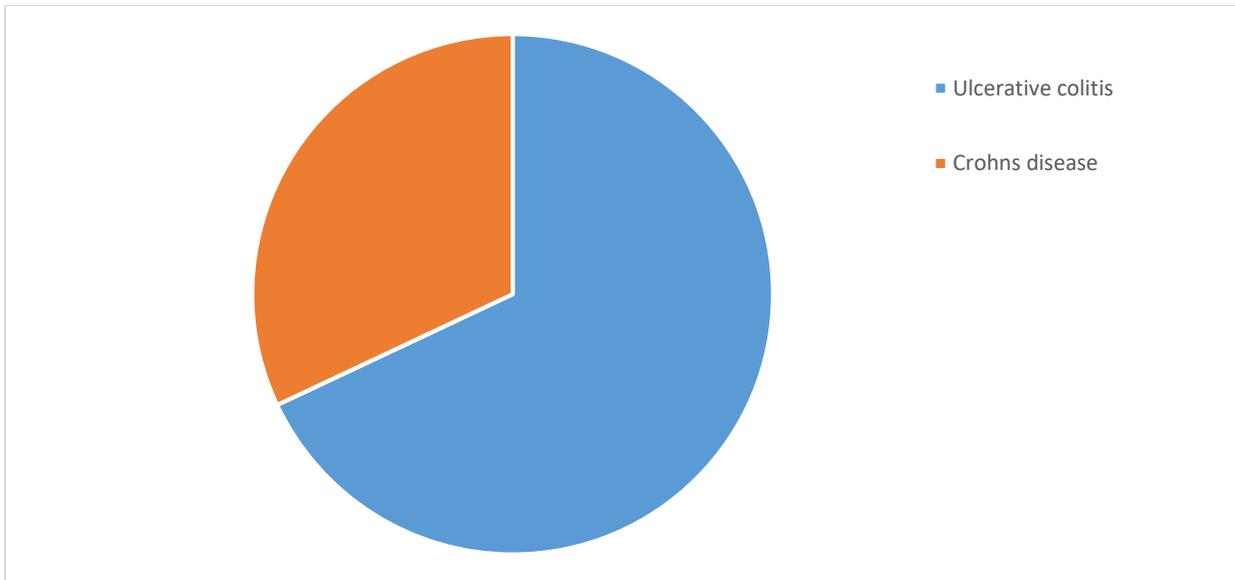
Table 1: Distribution according to the age at diagnosis

Age group	Number	%
10 to 19	3	12
20 to 29	8	32
30to 39	5	20
40to 49	3	12
50to 59	3	12
60 and more ‘	3	12
Mean +/- SD	37.16 +/- 15.77	

Table (1) shows the distribution of the sample according to the age , the majority of patients at diagnosis were 20 to 29 years.



Figure(1) shows the distribution of sample according to gender, females exhibited a higher percentage (52%) in the study compared with males.



Figure(2)Distribution according to the type of Inflammatory bowel disease ,68% of the cases had ulcerative colitis while 32% had crohn's disease.

Table (2) Clinical presentations

Clinical presentations	number	%
Blood in stool	18	72
Abdominal pain	14	56
Diarrhea	10	40
Weight loss	5	20
fatigue	3	12
Tenesmus	2	8
Constipation	1	4
loss of appetite	1	4

Table (2) shows the number and percentage of cases having the above symptoms. The majority of patients (72%) had blood in stool.

Table (3) Distribution according to the duration of symptoms

Duration	Number of cases	%
Less than a month		
0-7 days	3	12
8-14 days	4	16
15-21 days	1	4
22-30 days	0	0
More than a month		
1-2 months	9	36
3-4 months	1	4
5-6 months	3	12
7-8 months	1	4
9-10 months	0	0
11-12 months	0	0
More than a year		
1-2 years	1	4
3-4 years	2	8
>4 years	0	0
Mean +/- SD	6months +/- 51.9	

Table (3) shows the distribution of sample according to duration of symptoms with minimum duration is less than a week and maximum duration is 4 years ,the mean is 6months.

Table(4) Distribution of ulcerative colitis and crohn's according to the age at diagnosis.

Age group	Ulcerative colitis	%	Crohns	%
10 to 19	0	0	3	37.5
20 to 29	6	35	2	25
30to 39	4	23.5	1	12.5
40to 49	2	11.7	1	12.5
50to 59	3	17.6	0	0
60 and more	2	11.7	1	12.5
Total number	17	68	8	32
mean	40		28.5	

Table(4) shows most common age at diagnosis in ulcerative colitis ranges from 20 to 29 while in crohn's it ranges from 10 to 19 years ,mean age for diagnosis of ulcerative colitis is 40 years while it is 28.5 in crohns.

Table (5) clinical presentations in ulcerative colitis and crohn's disease patients.

Clinical presentation	Ulerative Colitis	%	Crohns	%
Blood in stool	15	88.2%	3	37.5%
Abdominal pain	7	41.1%	7	87.5%
Diarrhea	8	47%	2	25%

Weight loss	1	5%	4	50%
Total number	17	68%	8	32%

Table (5) shows the most common clinical presentations in ulcerative colitis which is blood in stool found in 88.2% followed by diarrhea found in 47% followed by abdominal pain found in 41.1% followed by weight loss found in 5% while in crohn's abdominal pain is the commonest presentation found in 87.5% followed by weight loss found in 50% followed by blood in stool found in 37.5% followed by diarrhea found in 25%.

Chapter four

Discussion

Discussion

Inflammatory bowel disease is more prevalent in females (52%) than in males (48%) and it agrees with a study done in a single regional treatment center in Ireland where 51.4% of cases were females and 48.6% were males ⁽⁶⁾ And in another study done in Al Brazil in 2018 females were also more than males. ⁽⁷⁾

Mean age at diagnosis of inflammatory bowel disease is 37 +/- 15 years and it agrees with the result in china 37.7 ± 20.5 years ⁽⁸⁾ and in Ireland 36years. ⁽⁶⁾

Mean age at diagnosis is 40years for ulcerative colitis and 28.5 years for crohns disease this finding is probably explained by the tendency of crohns disease to affect patients at a younger age.

The majority of patients in my study had Ulcerative colitis (68%) as what was concluded by a study done in Al Brazil ulcerative colitis cases were (54%) ⁽⁷⁾ and in a study done in china ulcerative colitis cases (84%) also were more frequent than crohns ⁽⁹⁾ while in Ireland crohn's disease cases were more frequent (65.6%). ⁽⁶⁾

Most common presentations in patients with inflammatory bowel disease is blood in stool found in 72% of patients followed by abdominal pain found in 56% of patients followed by diarrhea found in 40% of patients, while in Al Brazil blood in stool found in 71% of cases, abdominal pain in 78%, diarrhea found in 80%, in Ireland blood in stool found in 24% of cases , abdominal pain in 42%, diarrhea found in 50%.

The most common clinical presentation in patients with ulcerative colitis is blood in stool found in 88.2% diarrhea found in 47% then abdominal pain found in 41, in brazil blood in stool found in 84% of cases, diarrhea in 79% abdominal pain in 72%. ⁽⁷⁾

The most common symptoms described in crohns disease patients is Abdominal pain found in 87.5% of patients , weight loss in 50% of patients and blood in stool in 37% and it agrees with the results in a study done in china and the abdominal pain found in (83.3%),weight loss (45.4%) while blood in stool found in 26%.⁽⁸⁾

The mean time between onset of symptoms and dignosis is 6monthes while in brazil it is 23 month⁽⁷⁾ and in Romania it is 18 month⁽¹⁰⁾ may be due to the huge number of patients involved in both the studies ,the minimum duration in my study is less than a week and maximum duration is 4 years.

Chapter five

Conclusion and recommendation

Conclusion

Inflammatory bowel disease affects females more frequent than males ,mean age at diagnosis is 37, ulcerative colitis is more common than crohns disease ,there is a delay in diagnosis 6monthes after the onset of symptoms , The most common clinial presentations of ulcerative colitis is blood in stool, abdominal pain and diarrhea,while In crohns disease is abdominal pain and weight loss.

Recommendation

Further studies with large numbers of samples and compare the results between iraqi hospitals.

Encourage physician to detect inflammatory bowel disease patients and refer them to a Specialist earlier to minimize the risk of complications.

Chapter six

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