



Awareness about Inflammatory Bowel Disease a Survey Based Study

Safila Naveed*, Asra Hameed and Wishah Zehra Jaffery

*Faculty of Pharmacy, Jinnah University for Women,
Karachi –74600, Pakistan*

*Corresponding author e-mail: safila117@gmail.com

ABSTRACT

Inflammatory bowel diseases (IBD) are autoimmune diseases, which is a group of inflammatory conditions like Crohn's disease (CD) and ulcerative colitis (UC). In inflammatory bowel disease, there is an inflammation in the small intestine and colon. Symptoms of IBD include abdominal pain, vomiting, diarrhea, rectal bleeding, severe internal cramps/muscle spasms in the region of the pelvis and weight loss. Biopsy and colonoscopy are the techniques used to diagnose IBD. Since IBD is an inflammatory condition so the treatment of IBD is depend upon different drugs having high anti-inflammatory effects. Our survey aims to find its awareness among the pharmacy students of 4th and 5th professional Pharmacy. Cross sectional and random method was used to collect data from university students. Data was analyzed and represented in the form of tables and graph. According to our survey, 94% students have basic information about IBD, 67% students have knowledge about the symptoms of IBD, 28% have knowledge about the diagnostic techniques, 25% have information about the difference between CD & UC and 53% students have knowledge about the treatment strategies of IBD.

Keywords: Inflammatory bowel diseases, Crohn's disease, Ulcerative colitis.

INTRODUCTION

Inflammatory bowel disease

Inflammatory bowel diseases comprise two types of chronic intestinal disorders: Crohn's disease and ulcerative colitis¹⁻⁴. In the genetically susceptible hosts, inflammatory bowel disease results from an inappropriate inflammatory response to intestinal microbes. Importance of host-microbe interactions in the pathogenesis of

this disease is by genetic study. 1.5 million Americans suffer from these diseases. Etiologies of these diseases are unknown, but both are thought to arise from a disordered immune response to the gut contents in individuals who are genetically predisposed⁵. Currently accepted hypothesis purposed that in a genetically predisposed person, ulcerative colitis and Crohn's

disease result from a dysregulated response of the mucosal immune system toward intraluminal antigens of bacterial origin⁶⁻⁸. There is difference in the inflammatory response of both conditions, a trans-mural inflammation associated with granulomas is occurs in CD, whereas in UC the mucosa inflammation occurs. Both of these conditions, UC and CD exhibit a remitting & relapsing course and there is a significant, many times it's a dramatic, reduction in the patient's quality of life during exacerbations of the disease⁹. This has an impact on psychological health too. There is a greater level of distress in Patients having active IBD. There is also a feeling of lack of sense of self-control in IBD patients when compared with the normal population and patients with inactive IBD^{10,11}.

Symptoms

IBD is a chronic, intermittent disease. Symptoms of IBD range from mild to severe symptoms during relapses. There is disappearance or decrease in symptoms of IBD during the remission period. Symptoms of IBD usually depend on the segment of intestinal tract¹.

When inflammation in the digestive tract

Constipation

- May be primary symptom in UC in the rectum (proctitis).
- In cases of bowel obstruction, obstipation to the point and with no passage of flatus.

Diarrhea

- Blood in stool
- Incontinence
- Nocturnal diarrhea

Rectal pain and bleeding

- Tenesmus
- Severe bowel urgency

- Abdominal cramps
- Abdominal pain
- Nausea and vomiting is more in CD as compare to UC

General symptoms which are associated with UC and CD in some cases

- Fever
- Weight loss
- Loss of appetite
- Fatigue
- Growth retardation
- Night sweats
- Amenorrhea

Diagnosis of IBD in adult patients

Physical examination and the patient's history review is important and initial steps of diagnosis in IBD patients. Several tests, including blood tests (CBC), stool examination, biopsies, endoscopy, and imaging studies that help in excluding other causes of disease and to confirm the diagnosis¹.

Differentiation between UC and CD

See table 6.

Therapeutic implications

Treatment should include lifestyle modifications of IBD patient (e.g., smoking cessation for patients with CD), medical management of the disease as well as surgical interventions. A treatment with an anti-TNF- α monoclonal antibody is particularly effective in Crohn's disease. Anti-p40 monoclonal antibodies also had been reported effective in Crohn's disease & psoriasis⁹⁸^{12,13}.

Other treatments which are still under investigation includes the infusion of interleukin-10-producing T cell sand the administration of interleukin-10-producing bacteria^{14,15}. Some bacterial components, like *commensal* and *probiotic* are also being investigated for this condition^{16,18}.

Drugs in IBD management

Aminosalicylates-that are actually anti-inflammatory agents.

- Corticosteroids (steroids)
- Immune modifiers
- Anti-tumor necrosis factor agents (anti-TNF) (but not for “first-line” therapy)
- Antibiotics: like Ciprofloxacin & Metronidazole
- Probiotics

Surgical treatment

Hospitalization is required in IBD patients for surgery.

METHODOLOGY

This is a survey based study on the awareness of inflammatory bowel diseases (IBD). Cross-sectional and random methods were used to collect data from Department of Pharmacy, Jinnah University for Women, Karachi, about the awareness of inflammatory bowel diseases (IBD) in the month of Sep-Oct, 2014. A specially designed questionnaire was used for data collection. Data of 100 female students (n=100) was collected from 4th and 5th professional year students and analyzed. Different questions were asked for the subjects to collect the data to conclude the awareness rate in university students about IBD. Questions were asked on the basic knowledge or introduction of IBD, its symptoms, its diagnostic techniques, difference between ulcerative colitis (UC) and Crohn’s disease (CD), and the treatment strategies of IBD (figure 1).

Data analysis

We have statistically analyzed our data and used tables and graph for the representation of our data collected.

RESULT

Inflammatory bowel diseases comprise two types of chronic intestinal disorders: Crohn’s disease and ulcerative colitis. There is an inflammation in the small intestine and colon. This complex disease can arise as a result of the interaction of environmental and genetic factors. Our survey aims to find its awareness in 4th and 5th professional pharmacy students at Jinnah University for women, Karachi. Different questions were asked during our survey. (See figure 1.).

After our survey on the awareness of IBD, at JUW, Karachi, we found that only 53.4% of the pharmacy undergraduate Students belong to 4th and 5th professional pharmacy had awareness while 46.6% of the pharmacy undergraduate Students belong to 4th and 5th professional pharmacy had no awareness about inflammatory bowel diseases (IBD).

In our survey about the awareness of inflammatory bowel diseases (IBD) the first question was asked about IBD that “What is inflammatory bowel diseases (IBD)?” to 100 students belong to 4th and 5th professional pharmacy. 94 out of 100 pharmacy students had knowledge about IBD. While other 6 students of 4th and 5th professional pharmacy had no basic knowledge about inflammatory bowel diseases (IBD). (Table 1)

In our survey about the awareness of inflammatory bowel diseases (IBD) the second question was asked about the symptoms of IBD that “What are the symptoms of inflammatory bowel diseases (IBD)?” to 100 students belong to 4th and 5th professional pharmacy. 67 out of 100 pharmacy students had knowledge about the symptoms of IBD. While other 33 students of 4th and 5th professional pharmacy had no basic knowledge about the symptoms of inflammatory bowel diseases (IBD). (Table 2)

In our survey about the awareness of inflammatory bowel diseases (IBD) the third

question was asked about the diagnostic techniques of IBD that “What are the diagnostic techniques of inflammatory bowel diseases (IBD)?” to 100 students belong to 4th and 5th professional pharmacy. Only 28 out of 100 pharmacy students had knowledge about the diagnostic techniques of IBD. While other 72 students of 4th and 5th professional pharmacy had no basic knowledge about the diagnostic techniques of inflammatory bowel diseases (IBD). (Table 3)

In our survey about the awareness of inflammatory bowel diseases (IBD) the fourth question was asked about the knowledge of difference between ulcerative colitis (UC) and Crohn’s disease (CD) that “What are the differences between ulcerative colitis (UC) and Crohn’s disease (CD)?” to 100 students belong to 4th and 5th professional pharmacy. Only 25 out of 100 pharmacy students had knowledge about the difference between ulcerative colitis (UC) and Crohn’s disease (CD). While other 75 students of 4th and 5th professional pharmacy had no basic knowledge about the difference between ulcerative colitis (UC) and Crohn’s disease (CD). (Table 4)

In our survey about the awareness of inflammatory bowel diseases (IBD) the last question was asked about the treatment strategies of IBD that “What are the treatment strategies of inflammatory bowel diseases (IBD)?” to 100 students belong to 4th and 5th professional pharmacy. 53 out of 100 pharmacy students had knowledge about the treatment strategies of IBD. While other 47 students of 4th and 5th professional pharmacy had no basic knowledge about the treatment strategies of inflammatory bowel diseases (IBD). (Table 5)

CONCLUSION

After our survey on the awareness of IBD at JUW, Karachi, we find the overall awareness rate of IBD is much better in the students of pharmacy belong to 4th and 5th

profession. More than half (53.4%) of students are well aware about this inflammatory condition.

REFERENCES

1. World Gastroenterology Organization, 2009 WGO Global Guideline IBD, page 1-24.
2. Wellcome Trust Case Control Consortium. Genome-wide association study of 14,000 cases of seven common diseases and 3,000 shared controls. *Nature* 2007; 447:661-78.
3. Barrett JC, Hansoul S, Nicolae DL, *et al*. Genome-wide association defines more than 30 distinct susceptibility loci for Crohn’s disease. *Nat Genet* 2008; 40:955-62.
4. Duerr RH, Taylor KD, Brant SR, *et al*. A genome-wide association study identifies IL23r as an inflammatory bowel disease gene. *Science* 2006; 314:1461-3.
5. Abraham C, Cho JH. Inflammatory bowel disease. *N Engl J Med* 2009; 361: 2066–78.
6. Bouma G, Strober W. The immunological and genetic basis of inflammatory bowel disease. *Nat Rev Immunol.* 2003; 3:521-33. [PMID: 12876555]
7. Fiocchi C. Inflammatory bowel disease: etiology and pathogenesis. *Gastroenterology.* 1998; 115:182-205. [PMID: 9649475].
8. Podolsky DK. Inflammatory bowel disease. *N Engl J Med.* 2002; 347:417-29. [PMID: 12167685].
9. Casellas F, Lopez-Vivancos J, Badia X *et al*. Influence of inflammatory bowel disease on different dimensions of quality of life. *Eur J Gastroenterol Hepatol* 2001; 13: 567–72.
10. Graff LA, Walker JR, Clara I *et al*. Stress coping, distress, and health perceptions in inflammatory bowel

- disease and community controls. *Am J Gastroenterol* 2009; 104: 2959–69.
11. Sirois FM. Psychological adjustment to inflammatory bowel disease: the importance of considering disease activity. *Am J Gastroenterol* 2009; 104: 2970–2.
 12. Mannon PJ, Fuss IJ, Mayer L, *et al*. Anti-interleukin-12 antibody for active Crohn's disease. *N Engl J Med* 2004; 351: 2069-79. [Erratum, *N Engl J Med* 2005; 352: 1276.].
 13. Sandborn WJ, Feagan BG, Fedorak RN, *et al*. A randomized trial of ustekinumab, a human interleukin-12/23 monoclonal antibody, in patients with moderate-to-severe Crohn's disease. *Gastroenterology* 2008; 135:1130-41.
 14. Van Montfrans C, Hooijberg E, Rodriguez Pena MS, *et al*. Generation of regulatory gut-homing human T lymphocytes using *ex vivo* interleukin 10 gene transfer. *Gastroenterology* 2002; 123:1877-88.
 15. Baumgart DC, Sandborn WJ. Inflammatory bowel disease: clinical aspects and established and evolving therapies. *Lancet* 2007; 369:1641-57.
 16. Neish AS, Gewirtz AT, Zeng H, *et al*. Prokaryotic regulation of epithelial responses by inhibition of IkappaB-alpha ubiquitination. *Science* 2000; 289:1560-3.
 17. Mazmanian SK, Round JL, Kasper DL. A microbial symbiosis factor prevents intestinal inflammatory disease. *Nature* 2008; 453:620-5.
 18. Safila Naveed*1, Fatima Qamar1 and Syeda Zainab, Simple UV Spectrophotometric Assay of Bromazepam *Latin American Journal of Pharmaceutical Science LAJPS*: 1, 1; 001-008.

Table 1. Basic knowledge of IBD

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	6	6.0	6.0	6.0
	Yes	94	94.0	94.0	100.0
	Total	100	100.0	100.0	

Table 2. Symptoms of IBD

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	33	33.0	33.0	33.0
	Yes	67	67.0	67.0	100.0
	Total	100	100.0	100.0	

Table 3. Diagnostic techniques of IBD

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	72	72.0	72.0	72.0
	Yes	28	28.0	28.0	100.0
	Total	100	100.0	100.0	

Table 4. Difference between ulcerative colitis (UC) and Crohn's disease (CD)

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	75	75.0	75.0	75.0
	Yes	25	25.0	25.0	100.0
	Total	100	100.0	100.0	

Table 5. Awareness about treatment strategies of IBD

		Frequency	Percent	Valid percent	Cumulative percent
Valid	No	47	47.0	47.0	47.0
	Yes	53	53.0	53.0	100.0
	Total	100	100.0	100.0	

Table 6. Features that differentiates between ulcerative colitis (UC) and Crohn's disease (CD)¹

	Typical UC features	Typical CD features
Clinical	Frequent small-volume diarrhea with urgency Predominantly bloody diarrhea	Diarrhea accompanied by abdominal pain and malnutrition Stomatitis Abdominal mass Perianal lesions
Endoscopic and radiological	Diffuse superficial colonic inflammation Involvement of rectum, but this can be patchy Shallow erosions and ulcers Spontaneous bleeding	Discontinuous transmural asymmetric lesions Mainly involving ileum and right-sided colon Cobblestone appearance Longitudinal ulcer Deep fissures
Histopathological	Diffused inflammation in sub mucosa or mucosa Crypt architecture distortion	Granulomatous inflammation Fissures or aphthous ulcers; often transmural inflammation
Serological marker	Cytoplasmic Anti-neutrophil antibodies	<i>Cerevisiae</i> Anti- <i>Saccharomyces</i> antibodies

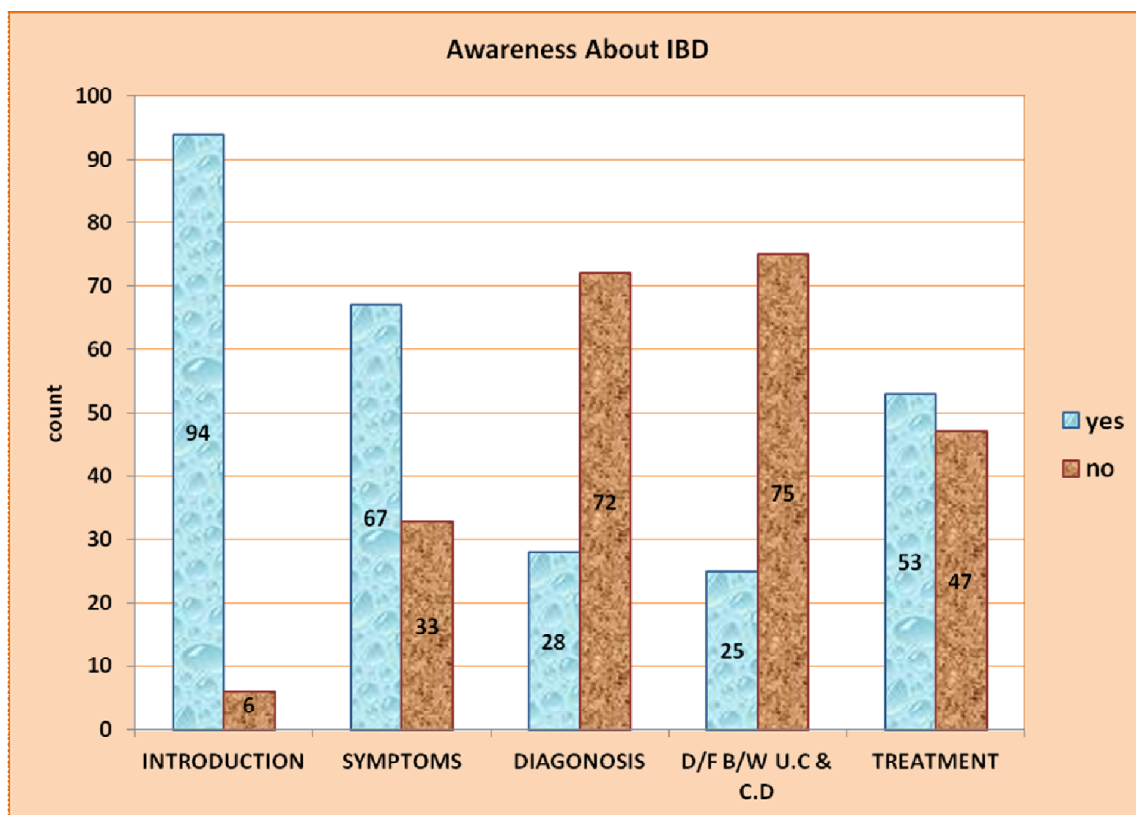


Figure 1. Awareness about IBD