



International Journal of Research in Pharmacy and Life Sciences

CODEN (USA): IJRPL | ISSN: 2321-5038

Journal Home Page: www.pharmaresearchlibrary.com/ijrpls



RESEARCH ARTICLE

A Study on Assessment of Risk Factors for Gastro Intestinal Abnormalities and Evaluation of Treatment Profile for the Management of Gastro Intestinal Abnormalities in a Tertiary Care Hospital

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Abstract

Functional gastrointestinal disorders (FGID) are a group of disorders characterised by chronic gastrointestinal symptoms (eg abdominal pain, dysphagia, dyspepsia, diarrhoea, constipation and bloating) in the absence of demonstrable pathology on conventional testing. The present study aimed to assess the risk factors for gastro intestinal abnormalities And evaluation of treatment profile for the management of gastro intestinal abnormalities in a tertiary care hospital. The prospective observational study was carried out for a period of 6 months. The study was conducted in a General medicine department in a tertiary care hospital. A written and informed consent was obtained from the recruited patients. A Total of 165 patients were enrolled in the study. In our study 31-39 years age patients were more 56(33.93%) as compared to other age groups. In our study Males patients were more 119(72.12%) as compared to females. Pancreatitis patients were more 33(20%), compared to other diagnosed cases. Lubricants prescribed patients were more 40(24.24%), compared to other prescribed drugs. The concomitant drugs used along with proton pump inhibitors were to control the symptoms of dyspepsia and pain associated with gastric disorders. Further studies are needed to analyze the appropriate prescribing pattern of drugs in the gastrointestinal disorders is needed.

Keywords: Functional gastrointestinal disorders, gastro intestinal abnormalities, abdominal pain, dysphagia, proton pump inhibitors, gastric disorders.

ARTICLE INFO

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ARTICLE HISTORY: Received 14 June 2023, Accepted 06 July 2023, Available Online 26 August 2023

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Citation: Kaku Haritha et al., A Study on Assessment of Risk Factors for Gastro Intestinal Abnormalities and Evaluation of Treatment Profile for the Management of Gastro Intestinal Abnormalities in A Tertiary Care Hospital. *Int. J. Res. Pharm, L. Sci.*, 2023, 11(1): 01-05.

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1. Introduction

Functional gastrointestinal disorders (FGID) are a group of disorders characterised by chronic gastrointestinal symptoms (eg abdominal pain, dysphagia, dyspepsia, diarrhoea, constipation and bloating) in the absence of demonstrable pathology on conventional testing. Historically, they were defined as conditions which had no organic basis, but this definition has evolved with increasing understanding of these conditions and we now know that they arise due to alterations in brain-gut communication. The current classification system divides them into 33 adult disorders and 20 paediatric disorders, the most common subtypes being irritable bowel syndrome (IBS) which causes abdominal discomfort, altered bowel habit and bloating; and functional dyspepsia (FD) which causes epigastric pain or discomfort, often related to eating which can be associated with fullness and satiety¹⁻⁶.

Epidemiology

FGID are very common with a worldwide prevalence of 40%, more common in women than men and this decreases with age.² They account for 12% of the workload in primary care and 30% of gastroenterology outpatient consultations. More than two-thirds of patients with FGID will have seen a doctor in the last 12 months and 40% will use regular medication. FGID pose a huge economic burden and treating them cost the NHS at least £72.3 million in the year 2014/2015, of which, two-thirds was on prescriptions, community care and hospital treatment.

The presence of FGID is often associated with chronic pain (eg fibromyalgia) and other functional syndromes (eg chronic fatigue syndrome), and two-thirds will have psychopathology including anxiety and depression¹⁻¹⁰. It is therefore not surprising that these patients have very poor quality of life, worse than other chronic medical conditions (eg grade III congestive cardiac failure and rheumatoid arthritis).

Pathophysiology

It is now clear that there is abnormal physiological functioning in patients with FGID, thought to be due to underlying alterations in GI motility (either too fast or too slow), visceral hypersensitivity, altered microbiota, increased intestinal permeability, low grade immune infiltration and altered central nervous system processing of sensory input.² However, symptoms and healthcare seeking arise for complex reasons involving an interplay between early life events and coping styles, learned behaviour, alterations in GI physiology, and associated psychological morbidity as seen in the biopsychosocial model in Fig 11.² Management is therefore not simply directed at the abnormal physiology or symptoms but has to address behaviours, cognitions and beliefs⁷⁻¹².

Clinical approach

Assessment

The optimal approach involves a holistic assessment starting with a detailed history, taking care to exclude the presence of red flags (weight loss, family history of cancer, nocturnal symptoms, anaemia or GI bleeding) and organic differentials. This involves being empathic, avoiding jargon, being honest and admitting when you do not have the answers, which takes a lot longer than organising yet

another futile test. In our opinion, 10 minutes is not sufficient for this kind of consultation, however, spending time addressing all these factors on the first visit and breaking the diagnosis of a functional disorder will save time (and money) on future visits. Examination should include an assessment for abdominal masses, and quality of pain as well as a rectal examination. The latter is essential to rule out rectal masses and haemorrhoids, and to assess for anal tone and function. The latter can be assessed at baseline and by asking the patient to squeeze as if they are preventing themselves from emptying their bowels. Anal hypotonia is associated with faecal incontinence and hypertonia can be associated with dyssynergic defecation, itself a cause of constipation.

Investigations

With the current ROME classification, it is possible to make a positive diagnosis of FGID based on the pattern of symptoms, and so exclusion of all organic disease is not necessary¹¹⁻²³.

Endoscopy: If a patient has typical IBS symptoms with a normal faecal calprotectin and there are no red flags to suggest a colorectal cancer (see earlier) then a lower GI endoscopy is not needed. There is little yield in performing a gastroscopy for *H pylori* negative dyspepsia in the absence of alarm symptoms (such as continuous pain, vomiting, anaemia and weight loss in patients under the age of 60), so this should not routinely be organised.

Abdominal ultrasound:

Abdominal ultrasound can be useful in IBS to screen for abdominal causes of pain and, in particular, for ovarian cancer which can cause pain, visible abdominal bloating and altered bowel habit. In dyspepsia, it can be useful to look for gallstones if the history is suggestive (ie colicky pain with fatty meals).

SeHCAT scan. If available, SeHCAT scans should be used to assess for bile salt malabsorption which is present in up to a third of patients with IBS-D. Typical symptoms include watery diarrhoea, often yellow in colour, with or without nocturnal symptoms and faecal incontinence.

GI physiology:

GI physiology is rarely indicated in IBS. One situation where it can be helpful is in patients who have severe constipation and are not responding to multiple laxatives. Lower GI physiology testing, particularly a colonic transit study and proctography can be useful at differentiating slow transit from a rectal evacuatory problem and can therefore help in fine tuning the management of constipation. In patients with functional dyspepsia, a gastric emptying study can be useful to look for severely delayed gastric emptying if there is persistent vomiting which is impacting on nutritional status, as this can help with decisions regarding feeding. For all physiological tests, it is important to be aware that medications, particularly opiates and anticholinergics, will alter GI motility and transit.

Management

General and initial approach

Once you have diagnosed a FGID, it is important to put a label on it, as patients often complain that they do not have a diagnosis or that 'nobody knows what is causing their symptoms', and then to explain in simple language what

FGIDs are; information sheets or online resources can be very useful. In order to manage patient expectations, it is useful to reiterate the incurable nature of FGID and to explain that the aim of management is not to remove symptoms completely or return the patient back to 'normal', but to give them more control over their symptoms¹³⁻¹⁷.

2. Methodology

The prospective observational study was carried out for a period of 6 months. The study was conducted in a General medicine department in a tertiary care hospital. A written and informed consent was obtained from the recruited patients. A Total of 165 patients were enrolled in the study.

Study Design: It was Prospective observational study.

Study Period: The Present study was conducted for a period of six months.

Study site: The Present study was conducted in a General medicine department of a tertiary care hospital.

Sample size: It was 165 Patients.

Inclusion criteria

- Patients with gastro intestinal abnormalities.
- Patients of either sex, diagnosed with gastro intestinal abnormalities.
- Patients who are willing to give consent.
- Patients receiving treatment for gastro intestinal abnormalities.
- Patients with clinical profile of gastro intestinal abnormalities.

Exclusion criteria

- Patients below 18 years.
- Patients who were not willing to join in the study.
- Patients who are not diagnosed with gastro intestinal abnormalities.
- Special population including pregnant women and lactating women.
- Psychiatric abnormalities.

3. Results and Discussion

Table 1: Age

26-30 years age patients were 44(26.66%),31-39 years age patients were 56(33.93%),40-45 years age patients were 34(32.72%),46-55 years age patients were 31(18.78%).

S.No	Age	Total N=165	Percentage (%)
1.	26-30	44	26.66
2.	31-39	56	33.93
3.	40-45	34	32.72
4.	46-55	31	18.78
	Total	165	

Table 2: Gender

In our study Males patients were 119(72.12%), Female patients were 46(27.87%).

S.No	Gender	Total N=165	Percentage (%)
1	Males	119	72.12
2	Female	46	27.87
	Total	165	

Table 3: Diet

Vegetarian patients were 86(52.12%), Non Vegetarian patients were 79 (47.87%).

S.No	Diet	Total N=165	Percentage (%)
1.	Vegetarian	86	52.12
2.	Non Vegetarian	79	47.87
	Total	165	

Table 4: Education

Primary education patients were 56(33.93%), Secondary education patients were 22(13.33%), Graduation education patients were 87(52.72%).

S.No	Education	Total N=165	Percentage (%)
1.	Primary	56	33.93
2.	Secondary	22	13.33
3.	Graduation	87	52.72
	Total	165	

Table 5: Marital status

Single patients were 36(21.81%), Married patients were 49(29.69%), Divorced patients were 80(48.48%).

S.No	Marital status	Total N=165	Percentage (%)
1.	Single	36	21.81
2.	Married	49	29.69
3.	Divorced	80	48.48
	Total	165	

Table 6: Clinical symptoms

Abdominal pain patients were 22(13.33%), Vomiting patients were 28(16.96%), Belching patients were 17(10.30%), Anus bleeding patients were 14(8.48%), Fever patients were 44(26.66%), Diarrhea patients were 40(24.24%).

S.No	Clinical symptoms	Total N=165	Percentage (%)
1.	Abdominal pain	22	13.33
2.	Vomiting	28	16.96
3.	Belching	17	10.30
4.	Anus bleeding	14	8.48
5.	Fever	44	26.66
6.	Diarrhea	40	24.24
	Total	165	

Table 7: Risk factors

Risk factors includes Alcohol patients were 44(26.66%), Smoking patients were 21(12.72%), NSAID patients were 31(18.78%),Peptic Ulcer patients were 30(18.18%), Infections patients were 39(23.63%).

S.No	Risk factors	Total N=165	Percentage (%)
1	Alcohol	44	26.66
2	Smoking	21	12.72
3	NSAID	31	18.78

4	Peptic Ulcer	30	18.18
5	Infections	39	23.63
	Total	165	

Table 8: Co morbidities

The Comorbidities includes Renal failure patients were 52(31.51%), Chronic Liver Disease patients were 18(10.90%),CHF patients were 20(12.12%),Thyroid problems patients were 35 (21.21%),Scabies patients were 40(24.24%).

S.No	Comorbidities	Total N=165	Percentage (%)
1	Renal failure	52	31.51
2	Chronic Liver Disease	18	10.90
3	CHF	20	12.12
4	Thyroid problems	35	21.21
5	Scabies	40	24.24
	Total	165	

Table 9: Laboratory test

Blood test patients were 56(33.93%), Endoscopy patients were 44(26.26%), Thyroid test patients were 27(6.36%),LFT patients were 10(6.06%), ECG patients were 28(16.96%).

S.No	Laboratory test	Total N=165	Percentage (%)
1	Blood test	56	33.93
2	Endoscopy	44	26.26
3	Thyroid test	27	6.36
4	LFT	10	6.06
5	ECG	28	16.96
	Total	165	

Table 10: Diagnosis of GIT disorders

Alcoholic Gastritis patients were 22(13.33%), Pancreatitis patients were 33(20%), Hernia patients were 19(11.51%), Hemorrhoids patients were 28(16.96%), Colitis patients were 30(18.18%), GERD patients were 33(20%).

S.No	Prescribing pattern of drugs	Total N=165	Percentage (%)
1	Alcoholic Gastritis	22	13.33
2	Pancreatitis	33	20
3	Hernia	19	11.51
4	Hemorrhoids	28	16.96
5	Colitis	30	18.18
6	GERD	33	20
	Total	165	

Table 11: Prescribing pattern of drugs

Anti-ulceratives prescribed patients were 38(23.03%), Antibiotics prescribed patients were 20(12.12%), Anti-emetics prescribed patients were 22(13.33%), Electrolytes prescribed patients were 18(10.90%), Antacids prescribed patients were 19(11.51%), Lubricants prescribed patients were 40(24.24%), Anti-protozoals prescribed patients were 8(4.84%).

S.No	Prescribing pattern of NSAID'S	Total N=165	Percentage (%)
1	Anti-ulceratives	38	23.03
2	Antibiotics	20	12.12
3	Anti-emetics	22	13.33
4	Electrolytes	18	10.90
5	Antacids	19	11.51
6	Lubricants	40	24.24
7	Anti-protozoals	8	4.84
	Total	165	

Discussion

- In our study 31-39 years age patients were more 56(33.93%) as compared to other age groups.
- In our study Males patients were more 119(72.12%) as compared to females.
- Vegetarian patients were more 86(52.12%) compared to Non Vegetarian patients were 79 (47.87%).
- Graduation education patients were more 87(52.72%) compared to other educational qualification patients.
- Divorced patients were more 80(48.48%) compared to other marital status of patients.
- Fever patients were more 44(26.66%) compared to other clinical symptoms.
- Risk factors includes Alcohol patients were more 44(26.66%) compared to other risk factors¹⁸¹⁻¹⁹⁰.
- The Comorbidities includes Renal failure patients were more 52(31.51%) compared to other comorbidities.
- Blood test done patients were more 56(33.93%) compared to other lab tests.
- Pancreatitis patients were more 33(20%), compared to other diagnosed cases.
- Lubricants prescribed patients were more 40(24.24%), compared to other prescribed drugs.

4. Conclusion

The Common GI diseases include colorectal cancer, gastro esophageal reflux disease, ulcerative colitis (UC), inflammatory bowel disease (IBD), and Crohn's disease (CD). Disorders of the GIT include gastritis and ulcers that are associated with infection of Helicobacter pylori, intolerance to certain nutrients, such as lactose, celiac disease, and malabsorption¹⁸⁻²⁵. Functional gastrointestinal disorders are characterized by persisting gastrointestinal symptoms in the absence of any identifiable underlying structural or biochemical explanation. The Gastrointestinal (GI) diseases, in particular, are becoming more common and have been linked to changing environmental factors brought on by industrialization, changes in diet, the increased use of antibiotics, consumption of alcohol and smoking. However, this study will be very much helpful for pharmaceutical companies in our country as there is a huge study of predominant companies in the sector of particular diseases.

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