

East African Medical Journal Vol 79 No 7 July 2002

IRRITABLE BOWEL SYNDROME IN BLACK KENYANS

G.N Lule, MBChB, MMed, Associate Professor and E.O. Amayo, MBChB, MMed, Senior Lecturer, Department of Medicine, College of Health Sciences, University of Nairobi, P.O. Box 19676, Nairobi, Kenya

Request for reprints to: Prof. G.N. Lule, Department of Medicine, College of Health Sciences, University of Nairobi, P.O. Box 19676, Nairobi, Kenya

IRRITABLE BOWEL SYNDROME IN KENYANS

G.N. LULE and E.O. AMAYO

ABSTRACT

Objective: To study the prevalence and clinical presentation of irritable bowel syndrome (IBS) in black Kenyans.

Design: A retrospective study.

Setting: Nairobi Hospital, an urban private institution.

Subjects: Case files of all patients presenting with abdominal pain.

Main Outcome Measures: Prevalence of IBS using modified Manning's Symptomatic criteria in 223 consecutive adult patients presenting with abdominal pain and discomfort who had normal clinical findings and normal general and gastrointestinal investigations.

Results: Out of the 3472 patient files screened, there were 281 patients who fitted the diagnosis of irritable bowel syndrome giving an overall prevalence of 8%. The mean age was 40 years with range of 11 to 75 years with a peak prevalence in the 3rd decade. The male to female ratio of 1.4:1 being statistical significant at a p-value of 0.010. There was no statistical significant difference between the males and females in constipation and diarrhoea at p-value of 0.84 and 0.82 respectively. Fifteen percent of the patients were either on antidepressants or had been seen by a psychiatrist. Nine percent had undergone laparotomy for the abdominal pain.

Conclusion: The Black African patient is equally as exposed to irritable bowel syndrome as is his counterpart in the western world and has similar morbidity patterns. The syndrome may account for over 10% of patients with abdominal pain presenting to gastroenterologists in Africa. Proper attention to symptomatology may lead to clinching the diagnosis without resorting to many unnecessary and expensive investigations.

INTRODUCTION

Irritable bowel syndrome (IBS) can be diagnosed on the basis of symptom criteria and limited evaluation to exclude organic disease(1). IBS has been defined as a functional bowel disorder in which abdominal pain may be associated with alteration of bowel habits and features of disordered defaecation and distension. In 1892 Osler referred to it as mucous colitis and since that time, the syndrome has been given sundry terms including spastic colitis, nervous colon and functional bowel disease(2).

In 1978, Manning *et al*(3) defined criteria for diagnosis of IBS as a condition in which there is abdominal pain relieved by defaecation, frequent stools especially at onset of pain, loose stools or diarrhoea, visible abdominal distension, mucus passage in stools and a sensation of incomplete evacuation. Recently a consensus panel updated these criteria resulting into standardised criteria for research and diagnosis. This was done because Manning's criteria were insensitive (58%) non-specific (78%) and less reliable in men hence the Rome consensus group.

The patient with IBS must have the following continuous or recurrent symptoms for at least three months:

Abdominal pain or discomfort characterised by the following:

- relief with defaecation
- association with a change in stool frequency
- association with a change in stool consistency and two or more of the following characteristics;
- altered stool frequency
- altered stool form
- altered stool passage
- abdominal bloating or subjective distension

IBS has also been referred to as a biopsychosocial disorder resulting from a combination of three interacting mechanisms which include altered gastrointestinal motility, psychosocial factors and disorderly sensory functions of the intestines. It has also been suggested that autoimmune interaction after gastrointestinal infections could lead to sensorimotor dysfunction seen in IBS(5).

IBS is a chronic relapsing condition but does not increase mortality or the risk of inflammatory bowel disease or colonic cancer.

IBS can present at any age although retrospectively patients note the onset of symptoms during childhood. About 50% of patients report initial symptoms before the age of 35 years and the development of symptoms at an older age group should perhaps prompt a closer search for underlying organic aetiology(2).

In the western world IBS affects over 15% of the population of which only 10% ever seek medical care.

However, the illness has enormous economic implications through direct costs in healthcare utilisation and investigations and indirect costs arising from absenteeism from work and transport costs.

In the United States of America IBS accounts for over 12% of the primary care consultations and rises to 28% in gastroenterology practice(1). An estimated 20-50% of gastroenterology referrals relate to this symptom complex. American and European cultures demonstrate similar frequencies of IBS across racial and ethnic lines. However, lower prevalence has been reported in Hispanics and Asians but the role of cultural influences and variable healthcare seeking behaviour is unclear. The sex ration is four females to one male and the constipation predominant IBS is more common in women.

A review of the available literature on IBS yielded no information about the status of this condition in black Africans hence the need for this study.

MATERIALS AND METHODS

The files of 3472 consecutive patients presenting with gastrointestinal symptoms between 1996 to December 2000 were retrieved. These were mainly patients referred to the authors from the Nairobi Hospital majority of whom were mainly from Nairobi urban environment and were from middle or upper class of society. Of these, 281 patients fitted a diagnosis of Irritable Bowel Syndrome (IBS). Fifty eight patients were excluded from the study due to being non-black Africans, or having incomplete available data.

The 223 patients included in the study had details of their characteristics entered in a preformed questionnaire. Parameters recorded included age, sex, presenting complaints, clinical findings, laboratory, endoscopic and radiological findings. Patients symptoms and signs were compared with modified Manning's criteria for diagnosis of IBS and results entered in a preset questionnaire.

All patients included in the study had normal blood counts, stool analysis, upper and lower GI studies and in some cases normal computerised tomography scans. Any patient with any systemic illness or dangerous GIT symptoms was excluded from the study. These included weight loss, nocturnal symptoms, blood in stools, recent antibiotic use, family history of colonic cancer, and abnormal physical examination.

Statistical Method: The data was entered into the EPI 16 software. The data was summarised to means, and standard deviation. The data was presented by pie charts, histograms and bar charts.

Association was tested by chi squared test with the level of significance being P-value less than 0.05.

RESULTS

Out of the 3472 patient files screened, there were 281 patients who fitted the diagnosis of Irritable Bowel Syndrome giving an overall prevalence of 8%. Of these 34 were excluded from the study because of being non Black Africans and the other 23 because their records were incomplete.

The mean symptom duration was 5.5 years with a range of 6 months to 36 years.

Figure 1 shows the sex distribution of the 223 patients. There were 131 males and 92 females with a M:F ratio of 1.4:1.

The age ranged from 11 to 75 years with the majority of patients presenting in the 4th decade. A significant proportion of patients (20%) had indicated their ages as "adult" and therefore could not be included in age group analysis.

All patients had suffered from abdominal pain at one time or the other during the course of their illness.

Both men and women complained of constipation and diarrhoea nearly at similar rates. Only a few patients (10%) indicated the exact site of the pain out of whom 60% localised it to the right iliac fossa.

Figure 1

Sex distribution of 223 patients with Irritable Bowel Syndrome

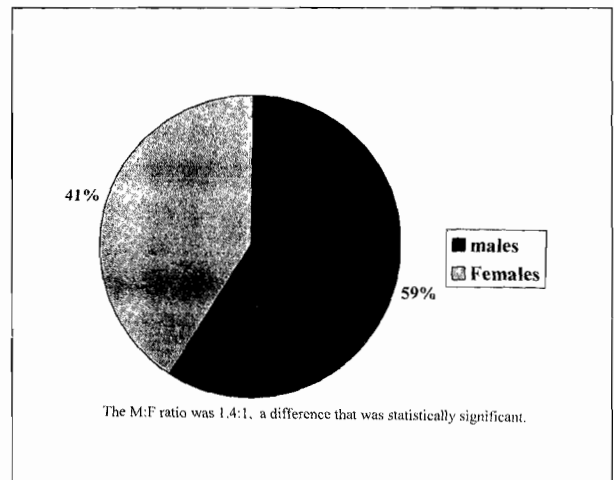


Figure 2

Sex distribution of 178 patients with Irritable Bowel Syndrome

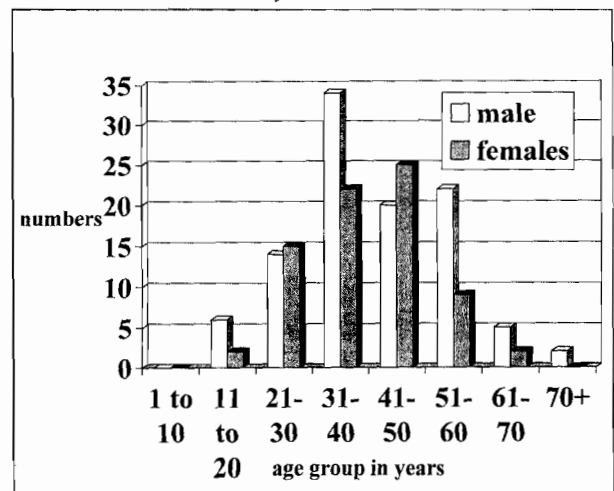


Table 1*Prevalence of the three major categories of irritable bowel syndrome symptoms*

Symptom	Male		Female		Total		P-Value
	No	%	No	%	No	%	
Abdominal Pain	131	100	92	100	223	100	Not significant
Constipation	70	53.4	47	51	117	52.4	0.84
Diarrhoea	56	42.7	37	40.2	93	41.7	0.82

Table 2*Other GIT symptoms in the 223 patients with IBS*

Symptom	Male		Female		Total		P-Value
	No	%	No	%	No	%	
Gas, Bloating, Flatulence	101	77	67	72.8	168	75	0.545
Visible Abdominal Distention	34	25.9	25	27.2	59	26.5	0.89
Mucoid Stool	23	17.6	18	19.6	41	18.4	0.85
Goat Like Pellets	14	10.7	21	22.8	37	16.6	0.35
Pain relieved by Defecation	15	11.5	7	7.6	22	9.1	*
Feeling of Incomplete Evacuation and Tenesmus	7	5.34	6	6.5	13	5.8	*

* The numbers were too few for statistical tests.

Gas, bloating and flatulence was a common presentation and was seen in over 75% of the patients.

Symptomatic distribution was similar in both sexes apart from 'Goat like stools' which were more common in females.

Table 3*Number of patients who had seen a Psychiatrist or were on psychological therapy or anti-depressants*

Sex	No.	%
Male	13	9.92
Female	18	19.5
Total	31	13.9

About 15% of the patients were on anti-depressant therapy or had been sent for psychological assessment. More females (9%) than males (6.5%) were on anti-depressants although the difference was not statistically significant. The commonest anti-depressant was Ludiomil and/or Amitriptyline.

Table 4*Number of patients that had undergone surgical procedures for their pain*

Sex	No.	%
Male	12	9.2
Female	8	8.69
Total	20	8.9

About 9% of the patients had undergone at least one or more surgeries for the pain. In most cases the indication was suspected as appendicitis followed by explanatory laparotomy.

DISCUSSION

Eight per cent of the total number of patients with gastrointestinal complaints seen in an urban environment over a five year period had symptomatology attributable to Irritable Bowel Syndrome. This compared well with the 10% figure quoted in European countries although it was well below that quoted in the USA (4).

Most patients had their symptoms for a long duration which averaged 5.5 years but was up to 36 years in one patient. Obviously, this finding which was similar to that reported elsewhere(1) had far reaching implications both in finances and absenteeism from work.

There were more males than females with irritable bowel syndrome (M:F 1.4:1 or 3:2). This was a significant but an unexpected finding. Western literature reports more females than males, and women are four times more likely to go to doctors for irritable bowel syndrome than men. However, cultural differences and financial support could have played a major role implying that less women would seek specialised care than their male counterparts who are employed and could afford to pay for the required investigations. The occupation of patients

had not been routinely recorded so the data could not be analysed as to the nature and implication of occupation held by the individual patients towards developing IBS.

Symptom sub-groups based on the predominant bowel habit (Table 3) had equal distribution at all ages and sexes. However, the symptom complex of 'Gas, bloating and flatulence' was quite common and was found in over 75% of the patients. This symptom complex is extremely difficult to treat and together with visible abdominal distension can be extremely frustrating to the patient leading to several consultations and numerous investigations and time loss from work as the patient moves from one doctor to another.

Stress and emotion affect gastrointestinal function to a greater degree in patients with irritable bowel syndrome compared with normal controls(6). Some of the common psychological symptoms have included somatization, anxiety, hostility, phobia and paranoia. In this retrospective study 14% of the 223 patients were on anti-depressants or actively seeing a psychiatrist thus exposing the psychosocial aspect to the syndrome.

Ten per cent of the patients had undergone one or more laparatomies for their pain; an expected finding which sometimes even further aggravates the situation.

In conclusion, the black African patient is equally as exposed to irritable bowel syndrome as is his counterpart in the western world and has similar morbidity patterns. The syndrome may account for over 10% of patients with abdominal pain presenting to gastroenterologists in Africa. Proper attention to symptomatology may lead to the diagnosis without resorting to many unnecessary and expensive investigations.

REFERENCES

1. Conlie, B. and Camilleri, M. Irritable Bowel Syndrome. *Clinical Perspectives in Gastroenterology*. 1999; **2**:329-330
2. Lehrer, J.K. and Lichtenstein G.R. Irritable Bowel Syndrome. *Medicine Journal*. 2001. **2**:376-383.
3. Manning, A.P., Thomson W.G., Heaton K.W *et al* Towards a Positive Diagnosis of the Irritable Bowel. *Brit. Med. J.* 1978; **2**: 653 - 654.
4. Drossman, D.A., Whithead, WY, Camilleri, M. Irritable Bowel Syndrome: A Technical Review for Practice Guidelines Development. *Gastroenterology*. 1997; **112**: 2120 - 2137.
5. Gwee, K.A., Leong Y.L., Graham, C. *et al* The Role of Psychological and Biological Factors in Post-Infective Gut Dysfunction. *GUT*. 1999. **44**:400 - 406.
6. Mayer, E. A., Naliboff, B. D., Chang, L., *et al* V Stress and Irritable Bowel Syndrome. *Am. J. Physiol Gastrointest Liver Physiol* 2001; **280**: G519-G524.