CASE REPORTS

INFLAMMATORY BOWEL DISEASE AT THE KORLE BU TEACHING HOSPITAL, ACCRA

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SUMMARY
Case files of patients with Inflammatory Bowel Disease (IBD) managed by the author in the Medical Department over the period 1997 – 2004 have been reviewed to identify some features of the disease that may aid improved diagnosis and management. The findings indicate that IBD may not be rare in the country and that there is usually a long delay in establishing the diagnosis. It appears that, in Ghana, more males than females are affected and that most are fifty years of age or below. Malignant colonic change is uncommon but there is a high default rate among the patients. Five patients (29%) died. Cases managed in an Arab country, between 1987 and 1996, have been compared. In that group more female than male patients were affected but the commonest age group affected was similar. The diagnosis was similarly delayed but no deaths were recorded as opposed to the Ghana patients. Since Inflammatory Bowel Disease (IBD) is a potentially treatable condition medical practitioners need increased awareness to avoid undue delay in diagnosis.

Keywords: Inflammatory bowel disease, ulcerative colitis, Crohn's colitis, erythema nodosum, pyoderma gangrenosum

INTRODUCTION
Inflammatory Bowel Disease (IBD) is thought to be rare in sub-Saharan Africa including Ghana. There have been scanty reports in the Ghana medical literature, but cases have been previously reported.[1] There are many more common causes of diarrhoea in Tropical Africa; hence IBD cases in the community are probably missed. The prevalence of IBD in Ghana is not known. Undiagnosed IBD leads to debility, considerable social problems and inconvenience to the sufferer especially when there is frequent diarrhoea. The chronic and relapsing pattern of symptomatology of IBD can go on for many years thus seriously affecting patients' quality of life and productivity.

There is also the potential risk of colonic malignancy in chronic sufferers exceeding ten years. Children and teenage patients may become physically retarded and secondary sexual development delayed; their education may be adversely affected. Over a 7 year period (1997 – 2004), 17 cases of IBD among Ghanaians have been managed by the author in the Department of Medicine & Therapeutics, Korle Bu Teaching Hospital. These cases have been reviewed in this study.

METHOD
This is retrospective analysis of the data accumulated. Patient case files as well as endoscopic results were reviewed. Indices used included sex, age, duration of symptoms before diagnosis, stool frequency, presence of blood and mucus in stools, extra-intestinal features, Haemoglobin at referral, Barium enema results, flexible sigmoidoscopic or colonoscopic diagnosis, histology results and patients outcome.

OUTCOME
Table 1 shows a breakdown of various parameters analyzed. There were 11 males and 6 females – sex ratio of 2:1. The average age was 39.4 years. The majority of patients were between 20 – 50 years old, one patient was more than 70 years old at the time of diagnosis. Whilst about a third had had symptoms for less than one year before diagnosis another third had suffered for over 5 yrs and two for over 20 years before diagnosis was made. Over 70% of the patients had stool frequency of more than 6 times per day which will be regarded as severe; one patient claimed to have been passing more than twenty times per day for several years seriously interfering with his work. Majority also passed bloody stools at one time or the other. Severe anaemia (Hb 5gm/dl) was recorded in only 5 patients whilst another 6 had Hb level above 10 gm/dl. Barium enema was performed in 6 patients – one was reported as normal, the rest compatible with ulcerative colitis.

Flexible sigmoidoscopy or colonoscopy was performed on all the patients and all revealed various changes compatible with active or chronic inflammatory bowel disease. Histology results were available in 16 cases: 12 confirmed ulcerative colitis, 2 Crohn's colitis, one non-specific colitis and one normal.

Table 1 Characteristics of patients seen at Korle Bu Teaching Hospital

Item	Characteristic	Frequency (%)
Sex	Male	11(65%)
	Female	6(35%)
Age (Years)	<20	4 (23.5)
	20-30	3 (17.6)
	31-40	4 (23.5)
	41-50	3 (17.6)
	51-60	2 (11.8)
	>60	1 (6.0)
Duration of Symptoms (years)	<1	5 (29.4)
	1-5	5 (29.4)
	6-10	4 (23.5)
	>10	2 (11.8)
	NA	1 (6.0)
Stool frequency (times/day)	<4	2 (11.8)
	4-6	3 (17.6)
	>6	12 (71.0)
Stool Appearance	Bloody	16 (94.0)
	Non-bloody	1 (6.0)
Haemoglobin (gm/dL)	<5	4 (23.5)
	6-10	5 (29.4)
	>10	6 (35.3)
	NA	2 (11.8)
Outcome	Alive including defaulters (5)	12 (71.0)
	Dead	5 (29.0)
Sigmoidoscopy/Colonoscopy	Ulcerative colitis	16 (94.0)
	Crohn's	1 (6.0)
Barium enema	Normal	1 (5.9)
	Ulcerative colitis	5 (29.3)
	Not Done	11 (64.7)
Histology	Ulcerative colitis	12 (71.0)
	Crohn's	2 (11.8)
	Non-specific colitis	1 (5.9)
	Normal	1 (5.9)
	Not Available	1 (5.9)
Other features	Pyoderma gangenosum	3 (17.6)
	Arthralgia	1 (5.9)

Table 2 Features of 18 Arab patients with inflammatory bowel disease

Item	Characteristic	Frequency (%)
Sex	Male	3 (17)
	Female	15 (83)
Age (yrs)	<20	0
	21 – 30	9 (50)
	31–40	4 (22)
	41-50	3 (17)
	51–60	1 (5.5)
	>60	1 (5.5)
Duration of illness before diagnosis (yrs)	<1	2 (11.1)
	1 – 5	8 (44.4)
	6 – 10	4 (22.2)
	>10	4 (22.2)
Haemoglobin (gm/dl)	<10	1 (5.5)
	>10	17 (94.5)
Stool frequency /day	<5	8 (44)
	>5	10 (56)
Stool appearance	Bloody	15 (83.0)
	Non-bloody	3 (17.0)
Clinical outcome	Frequent relapses	6 (33.3)
	Infrequent relapses	12 (66.7)
Other features	Erythema nodosum & arthralgia	3 (17)
	Pyoderma gangrenosum	0
Barium enema	Normal	8 (44)
	Abnormal	8 (44)
	Not done	2 (11.1)
Sigmoidoscopy/ Colonoscopy	Normal	3 (17)
	Abnormal	15 (83.0)
Histology	Normal	1 (5.5)
	Abnormal	15 (83.0)

Five patients have died. Of the 12 surviving patients 6 have defaulted from follow-up. Nearly all the patients had weight loss: some were cachectic. One male and 2 female had developed pyoderma gangrenosum before or during the time of bowel symptoms.

Autopsy reports confirmed gross extensive changes of inflammatory bowel disease; one patient had additional

malignant colonic changes, another had extensive polypoid changes (histology unavailable) as well as massive pulmonary embolism and pulmonary tuberculosis. One female aged 29 years had, in addition, cerebral infarct. Comparison with 18 hospital patients with inflammatory bowel disease managed by the author between 1987and1997 in an Arab country revealed some differences as well as similarities (Table 2).

Unlike patients in Ghana (Korle Bu hospital) the majority of patients (83%) were females, 50% were young aged between 21-30 years. The duration of symptoms ranged between 1-15 years similar to Ghana; nearly 50% had symptoms for 1-5 years before diagnosis was established. 83% had bloody stools but 39% had experienced constipation at some stage during their illness, a feature not documented among Ghanaian patients. Barium enema performed in 16 patients was abnormal in 50% Endoscopy (sigmoidoscopy or colonoscopy) with tissue biopsy was performed in all 18 patients and was abnormal in 15 of them. Histology was abnormal in 15 patients. Only one patient had Hb of less than 10gm/dl as opposed to about 50% of Korle Bu patients.

Among Korle Bu patient's pyoderma gangrenosum was the main extra-intestinal lesion whereas erythema nodosum and arthralgia were documented in the Arab patients. Erythema nodosum however is more difficult to diagnose in black Africans. Ulcerative colitis was the Predominant condition in both groups. No malignant bowel change and no deaths were recorded among the Arab patients; 5 deaths were recorded among Korle Bu patients; one of these had evidence of malignant colonic lesions at autopsy but histology was not available. Five of Korle Bu patients had defaulted.

DISCUSSION

There is a general impression that Inflammatory Bowel Disease is rare in Ghana. In a hospital survey of patients Biritwum et al[2] recorded 1864 (4.3%) of diseases of digestive system out of a total hospital admissions of 34,598 in 1996; inflammatory bowel disease was not documented. Infective and parasitic diarrhoeas, especially amoebic are very common, hence most cases are treated as such even when symptoms persist, recur or become chronic. This analysis shows that there is often a long delay in making the diagnosis, patients having tried various treatments including traditional or herbal.

Medical practitioners tend to repeat treatments for bacterial and parasitic infections before eventual referral to a specialist. The intermittent and relapsing pattern of the diarrhoea also contributes to the delay in diagnosis.

Some patients put up with considerable inconvenience seriously affecting their quality of life.

Those affected before adolescence become stunted and may have delayed secondary sexual development.[1] In Ghana males seem to be predominantly affected, whereas the Arab patients were predominantly females. Ninety two cases of inflammatory bowel disease (IBD) were reviewed in Kuwaitis by Al-Nakib et al.[3] These patients were a heterogeneous group including Kuwaitis, Non Kuwaiti Arabs, Pakistanis or Indians and other expatriates. There was equal sex distribution among Kuwaiti and non Kuwaiti Arabs as well as the overall total. Worldwide male female ratio is about equal. Stool frequency, the presence of blood in stool suggests that several of the cases were severe. Interestingly a significant number of the Arab and some Ghana patients had haemoglobin level at 10gms/dl or above. Malignant change was reported in one post mortem case in Ghana. This patient had bowel symptoms for over 20 years. Reports from South Africa also documented rarity of malignant change among African[4] but it is possible that the follow-up period was not long enough.

Pyoderma gangrenosum was the main dermatological manifestation of the disease among Ghana patients, being documented in 3 patients. In contrast erythema nodosum was recorded in the Arab patients. The reason for the difference is not clear. There was a high recorded death rate (29.4%) and also default rate (29.4) among Ghana patients. This may be because patients presented late when severely ill; some could not afford cost of treatment. It is also possible that some of those who defaulted might have died. Documented reports of inflammatory bowel disease in the West African sub region are scanty thus it is difficult to make any comparisons of the condition with our neighbouring countries. Two cases of Crohn's disease were documented in Dakar, Senegal.[5]

CONCLUSION

This brief review of cases of Inflammatory Bowel Disease show that the condition does exist in the community, may not be rare, and that it is probably under-diagnosed. Delay in diagnosis is likely due to low index of suspicion by medical practitioners and patients seeking other forms of treatment. Pyoderma gangrenosum seems to be the main cutaneous manifestation among Ghana patients; malignant change appears to be uncommon in both Ghana and Arab patients; but the numbers studied may be too small and the duration of follow-up too short for any meaningful deduction to be made. Medical practitioners should become suspicious when a patient presents with recurrent bouts of diarrhoea not responding to the usual treatment, especially when bloody. To assess the extent of inflammatory

bowel disease in the community will require a hospital or community based study.

ACKNOWLEDGEMENT

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