



Inflammatory Bowel Disease, a Rare or Under Diagnosed Disease in Nigeria

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Authors' contributions

This work was carried out in collaboration between all authors. Author MO designed the study, and wrote the first draft of the manuscript. Author RA revised the manuscript and added more literature search and authors AP and SM managed the literature searches. All authors read and approved the final manuscript.

Case Study

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ABSTRACT

Six Nigerians, consisting of 5 females and 1 male with confirmed inflammatory bowel disease (IBD) were recruited from a tertiary institution and two private hospitals in Lagos into this study from January 2001 to January 2014. Their ages at the time of first visit ranged from 27 to 65 years. They all had repeated bouts of bloody mucoid stools and abdominal pain plus or minus tenesmus requiring admission and fluid replacement. One of the cases even showed a total reversal of barium enema findings after the follow up treatment of oral sulphasalazine and prednisolone given. The four females and the male have remained relatively symptom free up to the time of their last visit in the follow up clinic, while one of the females was lost to follow up.

This is a prospective case series that highlights the need for a high index of suspicion to make a diagnosis of inflammatory bowel disease in an environment where the reported incidence is low. Its diagnosis requires a team approach between the gastroenterological surgeon, radiologist, gastroenterologist Physician and a sub-specialized pathologist.

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1. PRESENTATION OF CASES

1.1 Case 1

A 35 year old female Nigerian health worker presented in 2001 at a private hospital in Lagos with a one week history of frequent passage of bloody mucoid stools, up to 4 times per day with associated anorexia, vomiting and lower abdominal pain which was preceded by a low grade fever and generalized dull headache. She initially responded to fluid replacement, antiemetics, antibiotics (amoxicillin, metronidazole and ciprofloxacin) as well as antidiarrhoeal. She was then discharged after remarkable improvement, to be re-admitted three weeks later with worsening bouts of bloody mucoid stools averaging 2-4 times per day. This later increased to over six times per day and finally became frequent enough to disturb her night sleep. Her symptoms did not improve in spite of further treatment with antidiarrhoeals, antibiotics, and intravenous fluid. Stool analysis showed occult blood and pus. White cell count on presentation was 16,000. Haemoglobin concentration dropped from 10.2gm% at first admission to 8.2gm% on second admission. Retroviral screening was negative. Abdominal and pelvic ultrasound scan were essentially normal and no masses were clinically palpable per abdomen. Barium enema showed loss of haustral markings in the sigmoid, descending and transverse colon giving a tubular narrowed 'pipe stem' colon, (Fig. 1a.)



Fig. 1a. Showing ahaustrations in the left half of the colon which is narrowed to a pipe stem

There was coarse granular mucosa with associated inflammatory polyposis and shortening. Proctosigmoidoscopy showed hyperaemic mucosa with contact bleeding.

She was transfused with 2 pints of blood and commenced on high dose steroids intravenously and as enema (500mg hydrocortisone iv 12hrly for one day followed by 100mg 8hrly which was gradually tailed down to 100mg daily within six days. Hydrocortisone 100mg in 100mls of water was given twice daily as rectal enema for five days). Oral prednisolone 5mg thrice daily was commenced on the 3rd day and increased to 10mg thrice daily after discontinuation of intravenous hydrocortisone. Two weeks later, she was discharged to home when the stools were well formed, on prednisolone and sulphasalazine tablet 500mgq.d.s. Her first return at the outpatient clinic confirmed that the bloody mucus stools had ceased and occult blood test in the stool was negative three months after discharge. Prednisolone was tailed down and discontinued after six weeks. Repeat barium enema films five months after the onset of treatment showed a complete reversal of the abnormal features with the restoration of normal haustral folds, (Fig. 1b). This patient is still well controlled on maintenance aminosalicylate drugs, 10 years after management.



Fig. 1b. Showing a normal colon with reversal of haustrations in the colon after treatment

1.2 Case 2

A 29 year old Nigerian female banker presented in 2005 at the Lagos State University Teaching Hospital with chronic constipation of 16 years duration which commenced when she was admitted into boarding school. Later, she noticed blood on cleaning the anus and this progressed to frequent loose stools six years prior to referral. She then had up to 10 bowel motions without pus per day. There was associated lower abdominal pain without history of nausea, vomiting or fever. The family history of similar problems was negative. Clinical examination confirmed an undistended soft abdomen, with areas of tenderness that outlined the surface area of ascending, transverse and descending colon. There was no palpable abdominal mass seen. Digital rectal examination did not reveal any suspicious mass or tenderness and the examining finger was not blood stained. A provisional diagnosis of chronic inflammatory bowel disease was made. She was commenced on antibiotics and antidiarrhoeal drugs whilst awaiting the results of investigations. Stool microscopy did not reveal any pathogen whilst a retroviral screening was negative. Barium enema showed numerous granular defects more in the transverse colon, ascending and descending colon, thus suggesting inflammatory bowel disease and Video colonoscopy suggested a non-specific colitis. She was therefore commenced on Salazopyrine and later sulphasalazine (500mg.b.d) with a remarkably response and improvement. Two years post treatment and whilst on follow up with maintenance sulphasalazine, her condition remained stable before she was thereafter lost to follow up when she relocated to the United States.

1.3 Case 3

A 24 year old male, who presented in 2007 at the Surgery outpatient clinic in a tertiary hospital in Lagos, with a 5 year history of frequent bloody stool with pus. There was associated abdominal pain (something moving in the abdomen), fever, loss of appetite and weight loss but no cough. He had indigestion associated with heart burn, frequent belching and swollen painful wrist, elbow and knee joints. There was no history of vomiting; fever was gradual in onset, intermittent and only relieved by Paracetamol tablets. Subsequently, patient developed discharging sinuses of a yellowish material around the anus. He was not a known sickler.

On examination, he was afebrile, pale and cachectic. Abdomen was not distended, soft with no palpable mass. Digital rectal examination confirmed rectal induration, perianal ulceration with discharge, without a palpable mass. A diagnosis of chronic diarrhoea suspicious of inflammatory bowel disease was made. Apart from a PCV of 28%, other laboratory results including stool microscopy, serum electrolytes/urea, and abdominal ultrasound were all normal. Barium enema showed pseudopolyps in the sigmoid colon, however, the transverse and ascending colon were not well demonstrated due to considerable reflux of barium. Biopsy of rectal induration showed on histology, acute on chronic inflamed tissue intensely infiltrated by polymorphs, lymphocytes, and plasma cells. Dilated and congested vascular channels were also seen. Overlying skin shows moderate acanthosis and papillomatosis. He has since been on haematinics, blood transfusion, intravenous steroids combined with daily steroid enema as 500mg hydrocortisone in 100ml of water rectally. Maintenance treatment of sulphasalazine tablets 500mg thrice daily was used and since 2007, patient had been on admission twice.

1.4 Case 4

A 65 year old female retiree suddenly came down with bouts of bloody diarrhoea totalling about 9 times per day in 2011, with associated loss of appetite, abdominal pains, tenesmus, nausea and generalized malaise. On examination she was not found to be distressed, not pale, afebrile and anicteric. Abdominal examination and HIV screening were negative. Stool examination, abdominal ultrasound scan and laboratory tests were all essentially normal. She was therefore placed on antidiarrhoeals and antibiotics with significant improvement, only to return 7 months later while observing the Ramadan fasting with worse similar symptoms. Now the bloody mucoid diarrhoea was 15 times per day. She presented with associated severe tenesmus, vomiting, complete loss of appetite and weakness. A family history of similar symptoms was negative. On examination she was debilitated, pale but there was no palpable abdominal mass. Her PCV was 20% and occult blood in stool was positive. Abdominal scan was negative but her barium enema showed generalized grossly dilated ahaustral large bowel loops with a granular mucosa (Fig. 2).



Fig. 2. Showing a generally severely dilated colon that is ahaustrated. Note the granular mucosa

No pseudopolyps or distinct ulcers seen. She was sent for a colonoscopy which revealed widespread colonic mucosal ulceration from the rectum to the caecum and contact bleeding. Biopsy confirmed an indeterminate inflammatory bowel disease. She was therefore commenced on Mesalamine (800mgtds), Prednisolone (5mgbd) and haematinics and has improved remarkably. Follow up showed that she has remained stable for over three years now.

1.5 Case 5

A 46 year old Nigerian woman presented at a private diagnostic center with on and off bloody diarrhea for the past 10 years, a frequency of about 7 times per day, tenesmus, loss of appetite and intermittent pain in the knee, ankle and wrist joints. On examination, there were no significant findings. Laboratory test revealed an increased white cell count and a negative HIV screening. Barium enema showed granular mucosal, loss of haustral markings, and mildly narrowed colon. Colonoscopy revealed a congested oedematous mucosa, scattered ulcers and bleeding more in the sigmoid and rectum. Biopsy result following a colonoscopy confirmed patchy areas of ulceration with inflammation consistent with IBD probably due to ulcerative colitis. She improved very well on a regime of prednisolone (5mgb.d) and sulfasalazine (500mgtds) with the frequency of stooling reducing to twice per day.

1.6 Case 6

A 36 year old Nigerian secretary presented at a private hospital in January 2014 with a 4 year history of frequent passage of blood stained mucopurulent stools, 4-6 times per day, colicky abdominal pain, tenesmus, nausea and weight loss. She has been repeatedly treated in different hospitals without much improvement. On clinical examination, there was abdominal tenderness, more on the left side, no abdominal mass and lymphocytosis. Examination of the stool was negative. HIV screening tests was also negative. Abdominal scan showed a gassy abdomen which made the examination quite difficult but no definite mass was seen. Barium enema showed loss of colonic haustrations in the left half of the colon, granular mucosa and pipe stem narrowing of the descending and transverse colon, (Fig. 3). Colonoscopy and biopsy confirmed chronic inflammation. She was therefore placed on prednisolone (5mgb.d) and Sulphasalazine (500mgb.d) and her symptoms improved within 3 weeks of commencement of symptoms. She has remained stable till date.

2. DISCUSSION

In the West African subregion, the volume of cases of Inflammatory bowel disease reported remains low [1-5]. In a 13 year period spanning three Lagos hospitals, we present 6 cases of inflammatory bowel disease (IBD) with a female preponderance. The patients' ages confirm the two peaks established in literature at 15-25years first peak and later peak of 40-60 years [6]. None of them had a family history of IBD. The reported low incidence in West Africa needs further review [7]. With the influx of diagnostic facilities and relatively increased number of specialists in Nigeria now, diagnosis has improved significantly and so it may well be that many cases that were previously missed may be due to previous lack of diagnostic tools especially in an environment where awareness among the populace is equally very low [1]. Often, a patient presenting with chronic diarrhoea, abdominal pain, and weight loss which are the hallmarks of uncomplicated IBD is usually misdiagnosed as due to amoebic or bacillary dysentery [8]. This was confirmed in this study as most of the cases were initially placed on antidiarrhoeals and antibiotics which temporarily controlled the symptoms but commonly relapsed. It was only when there was failure of response to these preliminary measures that other possible causes were sought.



Fig. 3. Showing the left half of the colon without haustral markings, severely narrowed and looking like a 'pipe stem'

The Gold standard for diagnosis in this condition is gentle colonoscopy with mucosal biopsy [1,9]. The classical features seen is that of extensive mucosal ulceration in the affected site which may involve the sigmoid colon and the left colon in general in ulcerative colitis. In colonic Crohn's disease, the predominantly affected area is the right colon although it could extend down to the left side with associated skip lesions. When Ulcerative colitis extends proximally, it is usually known to do so without skip lesions [10].

Where colonoscopy is not available, Barium enema could provide useful diagnostic aid [9], though reports from Mayo Clinic claim barium enema is rarely used anymore, and it can be dangerous because the pressure required to inflate and coat the colon can lead to rupture of the colon [11]. This claim has been countered by this study as all the patients presented had barium enema without any complications. In the absence of widespread access to colonoscopy, especially in resource limited countries cautious use of Barium enema for diagnosis has assisted remarkably [9,12]. All cases presented had barium enema with features strongly suggestive of inflammatory bowel disease. In Case 1 the abnormal barium enema features were completely reversed in the repeat procedures five months later. All cases responded favourably to drug treatment with steroids and maintenance on sulphasalazine. However, comparatively, the third case which was a male patient, pursued more of an indolent course with recurrent acute attacks and incomplete resolution of symptoms on maintenance treatment and persistence of perianal fissures and other extra intestinal features of chronic inflammatory bowel disease. This confirms previous reports in literature which stated that in addition to inflammation and ulcers in the digestive tract, IBD can cause problems in other parts of the body resulting in extraintestinal complications that include anaemia, thromboembolic events, osteoporosis, joint pains [13].

Toxic megacolon and perforation are major acute complications in inflammatory bowel disease especially in ulcerative colitis [10]. None of the cases developed such complication, thus suggesting possibly a more favourable pattern of this disease in these illustrated cases. This may also explain why reports on complications still remain few in our environment. Skilled Pathologists, with interest in this condition are still uncommon in our environment. There is need for a population based questionnaire study to identify and further investigate cases with the relevant symptoms. The need also for more trained colonoscopists and sub-specialized pathologists cannot be overemphasized.

3. CONCLUSION

A lot of work has to be done locally in promoting awareness about inflammatory bowel disease even amongst the health workers aside from the patients themselves. When this is accomplished, it may well be that the condition may not be completely uncommon as is presently opined but indeed possibly a more favourable pattern with less acute complications may be prevalent apart from the prevalent dilemma of under diagnosis.

CONSENT

Not applicable.

ETHICAL APPROVAL

Not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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