ORIGINAL ARTICLE

Lower intestinal endoscopy- inaugural year experience from a private centre in Lagos, Nigeria

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ABSTRACT

Background: Colonoscopy is an indispensable tool for investigating and intervening in disorders of the lower intestinal tract. There is an increasing body of data showcasing the findings and experiences of the various centers that carry out the procedure in Nigeria.

Objectives: This study set out to document the patterns of patient presentation, clinical characteristics of such patients and findings at colonoscopy.

Methodology: This was a retrospective study carried out on the records of the patients that presented for colonoscopy during the first year of operations (August 2014 to July 2015) of the endoscopy unit of Clinix Healthcare in Lagos, Nigeria. The endoscopy register was reviewed to retrieve clinical details of patients, the colonoscopy indication and findings.

Results: A total of 125 colonoscopies were performed during this period. There were 85(68%) males and 40(32%) females, giving a male to female ratio of 2.1:1. The clients' age ranged from 23 to 94years with a mean of 52.4years ±14.2. Most clients were in the 6th decade of life. Only 7(4.8%) had been referred for a routine screen. The most common symptom at presentation were haematochezia alone (73=58.4%) or in combination with other symptoms (90=72%). Others were alteration in bowel habits (15=12%), abdominal pain (12=9.6%) and suspected gastrointestinal bleeding as indicated by melaena stools or anaemia of undetermined origin (8=6.4%). A normal study was reported in 19(15.2%) procedures. Overall, the diagnostic yield was 84.8%. The most common abnormality was haemorrhoids as seen in a total of 68 patients. Other findings were suspected cancerous lesions in 25 patients, diverticular disease in 14 patients, polyps in 12 patients and features suggestive of mucosal inflammation alone in 6 patients.

Conclusion: The findings from the first year of colonoscopy in our Lagos-based privately owned centre showed that the most common indication for referral was lower GI bleeding, and the most commonly diagnosed lesion was haemorrhoids. These, are in keeping with previously documented series from other centres in the country.

Keywords*: Anaemia, bowel habits, haematochezia, haemorrhoids, males*

INTRODUCTION

Colonoscopy is not a novel procedure in Nigeria. However, three decades after the first published patient series, its uptake, utilization and availability is mostly in infantile stage of development.[1,2,3]

Recently, there is an increase in the number of publications on the use of colonoscopy from various parts of the country.[2,4,5,6,7,8,9] The government-owned tertiary institutions and their endoscopy units appear to be the principal sources of data for these publications. Series from private institutions contribute only a small percentage of this data.

Data from previously published series suggest a pattern of homogeneity of findings and it is interesting that those from the few published articles emanating from private institutions are in striking agreement also.[2,7,9]

This article seeks to document findings from the inaugural year of operation of a private colonoscopy unit in Lagos, the commercial nerve centre of Nigeria. We sought to examine the demographics of the clients who presented for the procedure, indications for their referral, findings at colonoscopy and the overall diagnostic yield for the procedure.

METHODOLOGY

Clinix Healthcare Limited is a privately owned multi-diagnostics centre founded in 2014. The endoscopy suite was opened for operations in August of the same year and it served as the site for this study. The suite receives referrals from multiple sources- private and government-owned hospitals, staff clinics, nursing homes and wellness centers.

The records for all the patients that had colonoscopy examination during the first 12 months (August 2014-July2015) of operation of the endoscopy unit were retrieved and data was reviewed and captured in a *proforma*. Details retrieved from these records included demographic indices and specifics of each client's indication for referral.

All colonoscopies were performed with an Olympus video colonoscopy (*140 Series*) system with a *CF-140L* colonoscope. All patients had a 24-hour pre-procedure bowel preparation which consisted of liquid diet, and were advised to consume as much of clear fluids as they pleased. Additional medications included ingestion of 30mg of Bisacodyl laxatives which was taken in two divided doses 15 hours and 8-12hours before the procedure.

Along with the first dose of bisacodyl, 75 mg magnesium sulphate (*in the form of the readily available Epsom salt*) solution was taken after being dissolved in 1.5litres of fluid. The second dose of bisacodyl was taken with a 2litres solution of a salt containing polyethylene glycol and electrolytes. Another 2litres of this polyethylene glycol and electrolytes solution was taken 2hours prior to the procedure.

The patients presented after 6hours of fasting and after signing an informed consent form. They were connected up to vital signs monitor throughout the course of the procedure. Intravenous access is secured and through it analgesics and mild sedation is given in the form of 1-2mg of midazolam and 15-30mg of pentazocine. A digital rectal examination was done, and, thereafter, the colonoscope is manoeuvered towards and into the caecum. All analyses were performed using SPSS version 21.0 (SPSS INC, Chicago, IL, USA); a *p-value<0.05* was considered statistically significant.

RESULTS

A total of 125 colonoscopies were performed during the period. There were 85 (68%) males and 40 (32%) females, giving a male to female ratio of 2.1:1 (Figure 1).The clients' age ranged 23-94years, mean 52.4±14.2years. Sixty-nine (55.2%) of the patients were between the 5th and 6th decades of life (Figure 2).

Figure 1. Pie chart showing sex distribution

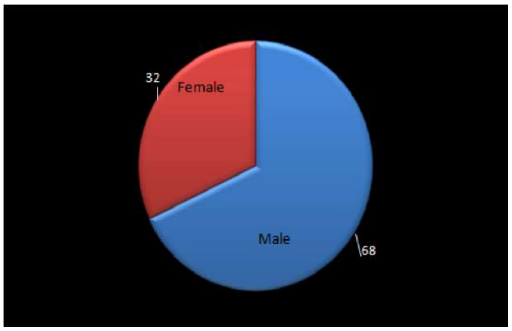
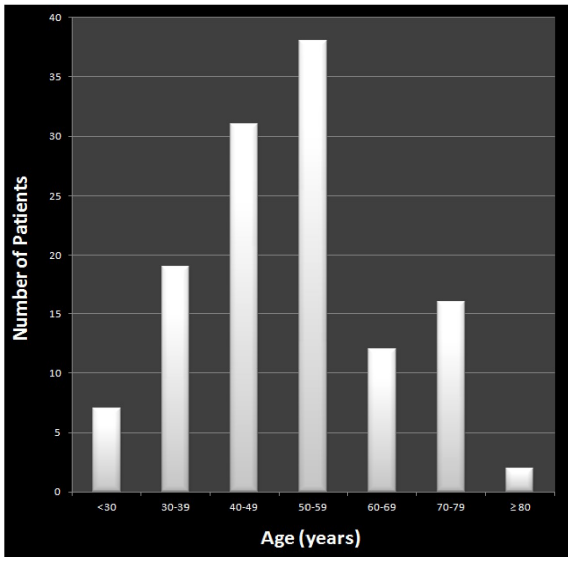


Figure 3 depicts the patterns of patient referral for this procedure. It shows that the most common symptoms at presentation were: haematochezia alone (73=58.4%) or in combination with other symptoms (90=72%), alteration in bowel habits (15=12%), and abdominal pain (12=9.6%). Others included suspected gastrointestinal bleeding as indicated by melaena stools or anaemia of undetermined origin (8=6.4%). The proportion of asymptomatic patients who had been referred for routine screening was small, only 7 (4.8%).

A normal study was reported in 19 (15.2%) procedures; therefore, the diagnostic yield per procedure was 84.8%. The commonest abnormality was haemorrhoids (either alone or in combination of some other lesion) as seen in a total of 68 patients (72.1% of patients with pathological diagnoses). Other significant findings were suspected cancerous lesions in 25(22.6%) patients, diverticular disease in 14 (13.2%) patients, polyps in 12 (11.3%) patients and features suggestive of mucosa inflammation alone in 6 (5.6%) patients (Figure 4).

Figure 2. Bar chart showing age distribution



Patients with diverticular disease were significantly older than those with other findings (65.9±13.2 vs. 49.9±13.3years; *p value*<0.001), *see Figure 5*. The patients with suspected cancerous lesions on colonoscopy did not differ significantly in age from the others; however, only left sided lesions were seen in the period under review. The age of a third (33.3%) of the 25 clients with suspected cancerous lesions was 40years or less. Histology report agreed with the endoscopic suspicion of a malignant lesion in all but one of these young patients.

Figure 3. Bar chart showing distribution of referral indications

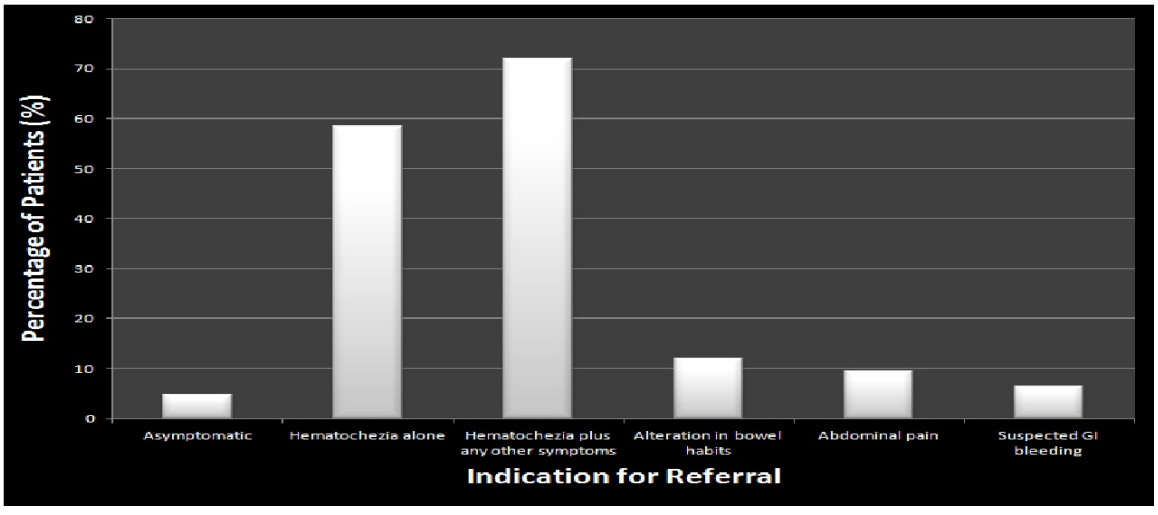


Figure 4. Bar chart showing endoscopic findings

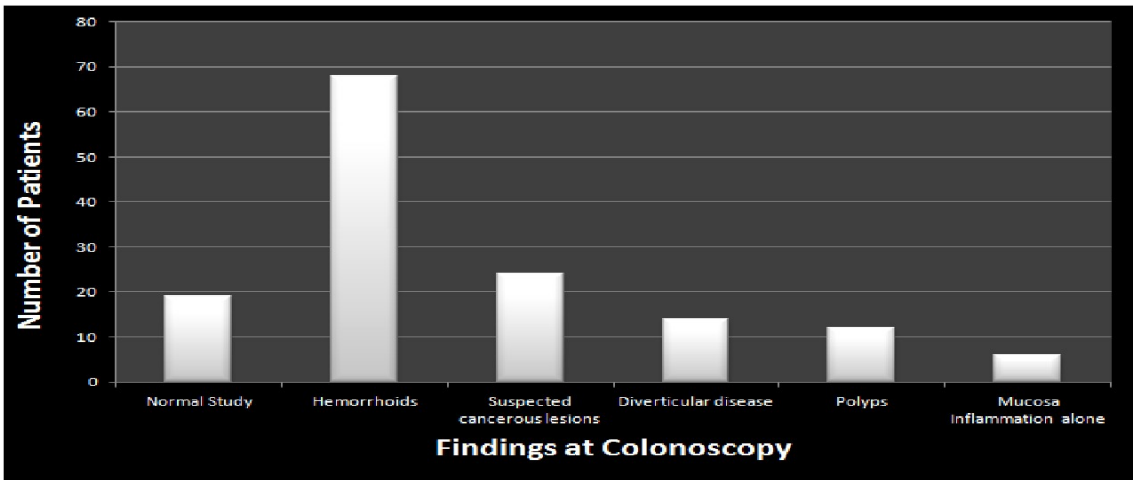


Figure 5. Bar chart showing the age comparison between diverticular disease patients and the others

DISCUSSION

The aim of this study was to determine patterns of patient presentation, clinical characteristics of such patients and findings at colonoscopy in the first year of operation of a privately run endoscopy outfit in Lagos, Nigeria.

The patients were predominantly males in this study, which has been a consistent pattern in virtually all Nigerian series.[1,2,4,5,6,7,8,9] A pooled analysis of data from 6 of the 7 mentioned Nigerian publications (Table 1) revealed that the average proportion of male patients was 67.7%, giving a male to female ratio of 2.1 to 1. Perhaps the reason for the preponderance is that the males in our environment are more economically empowered and as such present more often for this relatively expensive procedure.

The indication for referral for the procedure was predominantly for lower gastrointestinal bleeding (LGIB). This has been the most common indication from the earliest colonoscopy series in the country and in the others that followed.[1,2,4,5,6,7,8,9] The same holds true for data from across the continent.[10,11,12]

A normal study was reported in 15.2% of all the procedures. The overall diagnostic yield was 84.8%. This is high and has consistently been shown to be the trend across published works from Nigeria (Table 1). Such data could be used as a point of sale in attempts at publicizing the deployment of colonoscopy to the role it should be playing in especially

early disease detection. This is because it has previously been noted that the lack of coordinated efforts at public awareness is a major factor that has plagued the actualization of more wide spread colonoscopy use.[3]

Table 1. Endoscopy publications in Nigeria

	Total No. ofpatients	Males (%)	Females (%)	Polyp Detection Rate (%)	Most Common Pathologies at Colonoscopy
Obonna,*et al*	100	77(77)	23 (23)	76	Colitis
Alatise,*et al*	320	182 (56.9)	138 (43.1)	69.1	Haemorrhoids
Onyekwere,*et al*	512*	333 (65)	179 (35)	76.6	Haemorrhoids
Ismaila,*et al*	NA	NA	NA	61.8	Haemorrhoids
Olokoba,*et al*	103	70 (68)	33 (32)	79.6	Diverticulosis
Ngim,*et al*	20	15 (75)	5 (25)	85	Haemorrhoids
Ajayi,*et al***	68	44 (64.7)	24 (35.3)	86.8	Haemorrhoids

**Number of patients with recorded sex; NA= Not Available; ***The population consisted primarily of patients with lower gastrointestinal bleeding*

The pattern of pathological findings at colonoscopy is depicted in Figure 4. The results show the general pattern in most of the documented series and particularly when populations of LGIB were considered.[1,2,4,5,6,8,9,10]

The age of the patients with diverticular disease was significantly higher than the rest of the population studied, which is in keeping with previous series.[5,7] Among those with suspected cancerous lesions, there was an unsettling find that a third of them were ≤40 and the histology report in this sub-group was firmly in agreement with the colonoscopic suspicions. The data here concurs with recent publications highlighting this disturbing trend of cancerous lesions in young Nigerians.[13,14,15]

CONCLUSION

This findings from the first 12months of colonoscopy in our Lagos-based privately owned centre showed that the most common indication for referral was lower GI bleeding, and the most commonly diagnosed lesion was haemorrhoids. These findings are in keeping with the reports from various previous studies on colonoscopy in the country.

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