Upper Gastrointestinal Endoscopy Findings in Gusau, Zamfara State, North West Nigeria

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ABSTRACT

Upper gastrointestinal (UGI) endoscopy is indicated in patients presenting with symptoms of upper gastrointestinal disease as it provides accurate assessment of the underline disease thereby allowing for appropriate therapeutic intervention. Our aim was to report UGI endoscopic findings in a private health facility in Gusau, Zamfara State, North-West, Nigeria. A 3-year review of all patients that had upper gastrointestinal endoscopy between January 2016 and December 2018. Information was retrieved from the endoscopy register andanalyzed with SPSS 22 (IBM SPSS Statistics for Windows, Amonk, NY: IBM Inc). Three hundred and thirteen patients had endoscopy procedure. One hundred and seventy-two (55%) were males and 141(45%) were females with M: F ratio of 1.2: 1. Their mean age was 43.19±15.9 years with a range of 12 to 85 years. The commonest diagnostic indications were suspected peptic ulcer disease 138(44.1%) followed by dyspepsia 77(24.6%). Chronic gastritis was the commonest endoscopic finding, 88(28.1%) followed by gastroesophageal reflux disease. Gastric cancer and oesophageal cancer accounted for 7% and 0.3%, respectively. Forty-eight (15.3%) had normal endoscopic findings. Suspected peptic ulcer disease was the commonest indication for UGI endoscopy while gastritis was the commonest finding. High prevalence of malignancy was noted in our study and significant percentage of patients presenting for upper GI endoscopy had normal findings. Suspected clinical diagnosis performed poorly in predicting endoscopic findings.

Key-words: Spectrum, Upper, Gastrointestinal, Endoscopy, Findings, Gusau

INTRODUCTION

Upper gastrointestinal endoscopy is the diagnostic procedure of choice in patients presenting with symptoms of upper gastrointestinal disease like dyspepsia, reflux and bleeding among others.[1-3] Oesophago gastroduodenoscopy should be performed once indicated in any clinical setting to plan appropriate therapeutic intervention.[2,4]

Indications for upper gastrointestinal endoscopy are varied and range from dyspepsia to a more sinister suspicion of malignancy.[4,5] Indications for upper gastrointestinal endoscopy and the respective findings have been reported from different parts of Nigeria.[1-7] To date, data on indications and endoscopic findings in Gusau is lacking. Hence, we report the spectrum of endoscopic findings in patients referred for UGI endoscopy over a three-year period, January 2016 to December 2018 in Gusau, North-West Nigeria.

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MATERIALS AND METHODS

Study Setting

The endoscopy unit of Hilal Specialist Hospital is the only endoscopy referral centre in Zamfara State serving a population of four million people. The hospital receives referral for endoscopy from Federal Medical Center, Gusau, Ahmad Sani Yariman Bakura Specialist Hospital, Gusau, private clinics and other general hospitals in the state.

Methodology

Procedures are performed by a Consultant Gastroenterologist once a week and in some instances as an emergency procedure. All patients for upper gastrointestinal endoscopy were asked to fast overnight for at least eight to ten hours and present in the morning for elective cases while emergency cases were arranged by the Gastroenterologist. The endoscopic procedure was explained to the patients and consent for endoscopy obtained from each

patient before the procedure. Xylocaine 10% spray was administered to anaesthetize the oropharynx of patients. Patients were then placed on left lateral position on the endoscopy couch, and a plastic dental guard was held firmly in between the upper and lower incisors in the patient's mouth by the Endoscopy Nurse. A forward viewing Olympus GIF-Q140 series video (Olympus America Inc) gastroscope was gently introduced under direct vision to examine the oesophagus, stomach, and duodenum of the patients, after which the scope was gently withdrawn wholly from the mouth. Biopsy samples for histology were taken when indicated. Patients were observed after the procedure for one to two hours and subsequently, discharged.

Data collection and Analysis

The endoscopy register was reviewed and data collected include age, gender, indications for the procedure and endoscopic findings. These were coded and entered into SPSS program (version 22, Chicago, IL, USA) for analysis. Level of significance was taken as P-value less than 0.05.

Ethical Issues

Ethical approval was obtained from the Human Research Ethics Committee of the State Ministry of Health.

RESULTS

Three hundred and thirteen patients were referred for upper GI endoscopy over the study period of three years, January 2016 to December 2018. There were 172 males and 141 females with a male to female ratio of 1.2:1. The mean age of the study population was 43.19±15.9 years, the oldest was 85 years and the youngest was 12 years. The mean age of the male patients 43.01±15.51 years, was similar to that of the females 43.29±16.54 years, (P=0.378). Indications for upper GI endoscopy were varied with suspected peptic ulcer disease being the commonest indication followed by dyspepsia. Table 1 shows the overall indications over the study period.

Table 1: Indications for upper GI endoscopy at Hilal Specialist Hospital from January 2016 to December 2018

Indication (N=313)	n(%)
Dyspepsia	77 (24.6)
Anaemia/bleeding/Melaena	49 (15.7)
Suspected GERD	23 (7.3)
Suspected PUD	138 (44.1)
CLD Screening (Varices/PHTN)	10 (3.2)
GOO/Dysphagia	5 (1.6)
Suspected Malignancy (Oesophageal/Gastric)	11 (3.5)

GERD; gastro-oesophageal reflux disease, PUD; peptic ulcer disease, CLD; chronic liver disease, PHTN; portal hypertension, GOO; gastric outlet obstruction

Table 2: Predominant upper GI endoscopic findings

Findings (N=313)	n (%)
Oesophageal	
GERD/Reflux oesophagitis	49 (15.7)
Varices	14 (4.5)
Candidiasis	10 (3.2)
Hiatus hernia	32 (10.2)
Malignancy	1 (0.3)
Gastric findings	
Gastritis	88 (28.1)
Gastric erosions	25 (8.0)
Gastric ulcer	16 (5.1)
Malignancy	22 (7.0)
Duodenal findings	
Duodenitis	1 (0.3)
Duodenal ulcer	4 (1.3)
Normal findings	
With foamy gastric juice	18 (5.8)
Without foamy gastric juice	30 (9.6)

Major endoscopic findings are highlighted in the table above, even though overlaps of findings were common. Gastritis coexisting with gastric erosions was seen in up to 19 (6.1%) of patients. Oesophageal candidiasis coexisting with gastric cancer was seen in 7 (2.2%) and GERD coexisting with hiatus hernia was seen in 22 (7%) patients.

Although gastritis was observed more in females, there was no significant difference between age and gender in terms of endoscopic findings.

DISCUSSION

In this study, male predominance was found among those who presented for upper GI endoscopy. Similar observation was made by Danbauchi *et al.*[2] in Zaria and Jeje *et al.*[9] in Lagos, while Mustapha et al[6] reported equal male and female in Maiduguri. Perhaps male predominance in this study could be explained by the fact that the facility is a private centre and access to care may be subject to financial power which most women in this part of the country are disadvantaged.

Our patients were in the early middle age, although older than the patients' population studied by Malu *et al.* and Danbauchi *et al.* in Zaria.[1,2] They are however a decade younger compared to the study by Picardo *et al.* from Enugu in South-Eastern Nigeria.[8] There is wide variability of access to health care in public and private centres, and this variability may partly explain the different demographic characteristics of these patients.

Suspected peptic ulcer disease was the commonest indication for referral for endoscopy, followed by dyspepsia. Several studies have reported dyspepsia as a common symptom warranting referral for upper gastrointestinal endoscopy.[1-5] It would be more appropriate to report dyspepsia as presenting symptom complex rather than peptic ulcer disease, as the later is a diagnosis only established after visualizing the lesion on endoscopy. Despite this, a number of requests for evaluation of suspected lesion of the upper gastrointestinal tract come in with a presumed diagnosis of peptic ulcer disease. The commonest endoscopic finding in our study was gastritis. Gastritis has consistently appeared as a common finding on upper GI endoscopy according to several studies.[1-6] Gastritis was found in association with other findings including oesophagitis, duodenitis and gastric erosions. It is reported as gastritis when it is the predominant feature seen.

Gastroesophageal reflux disease (GERD) was found in a significant number of our patients (15.7%), which did not include the non-erosive form of the disease. The non-erosive form presents with normal endoscopic findings. The endoscopy positive GERD frequently coexisted with hiatus hernia. GERD was found in 24.1% of dyspeptic patients that underwent upper gastrointestinal endoscopy in Kano, Nigeria.[10]

Overall, peptic ulcer disease, accounted for only 6.4% of the total endoscopic findings, despite it being the commonest presumed working diagnosis/indication. Peptic ulcer disease was reported in 11.2% of patients who underwent upper gastrointestinal endoscopy in Maiduguri.[12] Based on hospitalization and death rates, the prevalence of GERD has increased while that of peptic ulcer disease has been on the decrease.[15]

This wide disparity between clinical diagnosis and endoscopic findings was also observed by Tijjani *et al.*[11] where they compared clinical versus endoscopic diagnosis of patients presenting with symptoms of gastrointestinal disease. They concluded that clinical diagnosis alone is fraught with misdiagnosis and symptom overlap. Agbakwuru *et al.*[3] also reported poor agreement between clinical and endoscopic diagnoses in patients with symptoms of upper GI disease.

Malignancy-histology confirmed; gastric cancer-7% and oesophageal cancer-0.3% were seen, representing 7.3% of the total endoscopic findings, higher than peptic ulcer disease. Picardo in Enugu reported a prevalence of 3.1% of their patients having gastric masses on endoscopy.[8] Mustapha et al reported 1.7% of their patients in Maiduguri have gastric cancer.[12] This facility is the only endoscopic centre serving the entire State and this may explain the reason behind the high prevalence of upper GI malignancy as most patients are referred there for evaluation. There is no study to date from this community that looked at the prevalence of gastrointestinal tumours that would have provided insight into earlier reports.

There were no differences observed between genders on the endoscopic findings, across the whole spectrum. Although, more females had gastritis, it's not statistically significant, $P>0.05$. Other studies have reported mixed findings, with females having more gastritis and GERD.[6, 10]

A significant percentage of our patients had normal endoscopy findings. Picardo *et al.* reported 2.3% of their patients in Enugu who presented with dyspepsia had normal endoscopic findings.[8] Non-ulcer dyspepsia has been reported to be 15.4% in patients in Benin[13] which is similar to findings by other authors, such as Olokoba *et al.*[14] in Yola, who reported a prevalence of functional dyspepsia to be 6% in their series. The wide disparity seen in the prevalence of normal endoscopic findings in the setting of clinical indication for upper GI endoscopy could be explained by many factors including easy access to the procedure, affordability and availability of the procedure as well as low or high threshold for requesting the procedure by the attending physicians among others.

CONCLUSION

Presumptive diagnosis of peptic ulcer disease is the commonest indication for upper gastrointestinal endoscopy in our patients and gastritis is the most frequent endoscopic finding. Sometimes clinical diagnosis could be wrong and so, upper gastrointestinal endoscopy should be performed once indicated in patients presenting with symptoms of upper gastrointestinal disease.

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