

INDICATIONS FOR OESOPHAGOGASTRODUODENOSCOPY IN ILORIN, NIGERIA- A 30 MONTH REVIEW

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ABSTRACT

Background: Oesophagogastroduodenoscopy is one of the most commonly performed endoscopic procedures. Properly performed, it provides valuable information in patients with upper gastrointestinal conditions. Oesophagogastroduodenoscopy is a visual examination of the upper intestinal tract using a lighted, flexible fibreoptic endoscope or videoscope.

Oesophagogastroduodenoscopy is generally indicated for evaluating upper abdominal symptoms such as dysphagia or odynophagia, oesophageal reflux symptoms, gastroduodenal or oesophageal ulcer, upper tract stricture or obstruction, gastrointestinal bleeding, persistent vomiting of unknown cause etc.

This study is therefore to review the indications for oesophagogastroduodenoscopy in Ilorin, Nigeria.

Aim: To review the indications for oesophagogastroduodenoscopy in Ilorin, Nigeria.

Methodology: A review of the indications for oesophagogastroduodenoscopy was undertaken to cover a thirty-month period from June 2006 to November 2008. The endoscopy register of the operating theatre was examined over this period. The biodata of the patients who underwent the procedure over this period was reviewed.

Results: A total of 206 patients had oesophagogastroduodenoscopy done on them during the period under review. 124 of the patients were males (60.2%) while 82 were females (39.8%).

The indications for oesophagogastroduodenoscopy were dyspepsia, 94 patients (45.6%); upper gastrointestinal tract bleed, 54 patients (26.2%); gastric outlet obstruction, 12 patients (5.8%); gastric cancer, 11 patients (5.3%); dysphagia, 9 patients (4.3%); acute exacerbation of peptic ulcer disease, 8 patients (3.8%); gastro-oesophageal reflux disease, 7 patients (3.4%); recurrent vomiting, 3 patients (1.5%); bloody stool, 2 patients (1.0%); epigastric mass, 2 patients (1.0%); 1 patient (0.5%) each on account of excessive salivation, foreign body ingestion, ingestion of corrosive, and recurrent anaemia.

Conclusion: The commonest indication for oesophagogastroduodenoscopy in Ilorin is dyspepsia.

Key Words: Indications, Oesophagogastroduodenoscopy, Ilorin

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INTRODUCTION

Oesophagogastroduodenoscopy (OGD) is one of the most commonly performed endoscopic procedures. Properly performed, it provides valuable information in patients with upper gastrointestinal (GI) conditions. Oesophagogastroduodenoscopy is a visual examination of the upper intestinal tract using a lighted, flexible fibreoptic endoscope or videoscope.

The upper gastrointestinal tract begins with the mouth and continues with the oesophagus, the J-shaped stomach and ends in the duodenum^{1,2}.

Equipment

The flexible endoscope is a remarkable piece of equipment that can be directed and moved around the many bends in the GI tract. Endoscopes come in two types. The original pure fibreoptic instrument has a flexible bundle of glass fibres that collect the lighted

image at one end and transfer the image to the eye piece. The newer video endoscopes have a tiny, optically sensitive computer chip at the end. Electrical signals are then transmitted up the scope to the computer which then displays the image on a large video screen. An open channel in these scopes allows other instruments to be passed through in order to take tissue samples, remove polyps and perform other examinations^{1,2}.

Indications for Oesophagogastroduodenoscopy

Due to factors related to diet, environment and heredity, the upper GI tract is the site of numerous disorders. The indications for OGD include:

- (i) Upper abdominal symptoms
- (ii) Upper abdominal symptoms associated with other symptoms or signs suggesting serious organic disease (eg anorexia and weight loss) or in patients older than 45 years.
- (iii) Dysphagia or odynophagia
- (iv) Oesophageal reflux symptoms that are

- persistent or recurrent
- (v) Persistent vomiting of unknown cause
- (vi) Suspected neoplastic conditions
- (vii) Suspected gastroduodenal or oesophageal ulcer
- (viii) Suspected upper tract stricture or obstruction
- (ix) Gastrointestinal bleeding etc³

The procedure

Oesophagogastroduodenoscopy is usually performed on an out-patient basis. It is performed for diagnostic and/ or therapeutic reasons. The throat is often anaesthetized by a spray or liquid. Intravenous sedation is usually given to relax the patient, and cause short term amnesia. For some individuals who can relax, and whose gagging can be controlled, the examination is done without intravenous medication. The endoscope is then gently inserted into the upper oesophagus. Other instruments can be passed through the endoscope to perform additional procedures if necessary such as to obtain a biopsy specimen, and removal of a polyp or tumour^{1,2}.

Side effects and risks

A temporary, mild throat irritation sometimes occurs after the examination. Serious risks are very uncommon. One such is excessive bleeding, especially with removal of a large polyp or sedation from effect of anaesthesia. Others are perforation or tear. Quite uncommonly, a diagnostic error or oversight may occur.^{1,2}

MATERIALS AND METHODS

Setting of the study

The setting of the study was Eytayo Hospital and Maternity Centre, Ilorin. It is a private hospital that runs a specialist gastroenterology clinic. It receives referrals for gastroenterology consultations and OGD mainly from the University of Ilorin Teaching Hospital (UITH) Ilorin, other private hospitals, and other government-owned primary and secondary health facilities in Ilorin and its environs. This is because this procedure ie OGD is not readily available elsewhere in Ilorin. Ilorin is located in the North central zone of Nigeria. It serves patients from sub-urban and rural areas of Kwara state as well as neighbouring states of Ekiti, Kogi, Niger, Osun and Oyo. Ilorin also serves as the capital of Kwara state, and it is multi-ethnic in composition⁴.

The study was a retrospective one. A review of the indications for OGD was undertaken to cover a thirty-month period from June 2006 to November 2008.

The Endoscopy register was examined over this period. The bio-data of the patients who underwent OGD over this period was reviewed. The indications for which they underwent this procedure were also determined.

The oesophagogastroduodenoscope in use at the endoscopy unit of the hospital is Olympus GIF - XQ10 model with an Olympus ILK-CLK 3-4 light source, and a Pentax EG-2731 with a Pentax EPM-3300 videoscope. The data obtained from this was analysed using SPSS 10 statistical software.

RESULTS

At the conclusion of the study, a total of two hundred and six patients were found to have undergone OGD.

Demographic data of the patients

Age

The ages ranged from 7-85 years with a mean of 47.4+/-15.7years. There was a steady increase in the age of the patients up to fifth decade with a decline towards the ninth decade. See Table 1.

Sex

One hundred and twenty-four of the patients were males (60.2%) while eighty-two were females (39.8%) giving a male to female ratio of 1.5:1.

Indications for oesophagogastroduodenoscopy

The indications for OGD were dyspepsia, 94 patients (45.6%); upper gastrointestinal tract bleed, 54 patients (26.2%); gastric outlet obstruction, 12 patients (5.8%); gastric cancer, 11 patients (5.3%); dysphagia, 9 patients (4.3%); acute exacerbation of peptic ulcer disease, 8 patients (3.8%); gastro-oesophageal reflux disease, 7 patients (3.4%); recurrent vomiting, 3 patients (1.5%); bloody stool, 2 patients (1.0%); epigastric mass, 2 patients(1.0%); 1 patient (0.5%) each on account of excessive salivation, foreign body ingestion, ingestion of corrosive, and recurrent anaemia.

See Table 2.

Table 1: Age groups.

Age groups (Years)	Frequency (n)	Percent (%)
<10	1	0.5
10-19	8	3.9
20-29	21	11.1
30-39	34	16.5
40-49	53	25.7
50-59	44	21.4
60-69	26	12.6
70-79	13	6.3
80-89	6	3.2
Total	206	100

Table 2: Sex distribution and Indications for Oesophagogastroduodenoscopy.

Indications	Frequency		Percent		Total (%)
	Male (n)	Female (n)	Male (%)	Female (%)	
Dyspepsia	50	44	24.3	21.3	45.6
UGI bleed	42	12	20.4	5.8	26.2
GOO	10	2	4.9	0.9	5.8
Gastric cancer	8	3	3.9	1.4	5.3
Dysphagia	5	4	2.4	2.0	4.4
PUD	3	5	1.5	2.4	3.9
GORD	3	4	1.5	1.9	3.4
Recurrent vomiting	0	3	0	1.5	1.5
Epigastric mass	2	0	1.0	0	1.0
Bloody diarrhoea	2	0	1.0	0	1.0
Excessive salivation	0	1	0.5	0	0.5
Ingestion of corrosive	1	0	0.5	0	0.5
Foreign body ingestion	1	0	0.5	0	0.5
Recurrent anaemia	0	1	0.5	0	0.5
Total	127	79	62.9	37.1	100.0

Key:

UGI = Upper gastrointestinal tract

GOO = Gastric outlet obstruction

PUD = Peptic ulcer disease

GORD = Gastro-oesophageal reflux disease

DISCUSSION

A review of the literature shows that OGD has been widely available in Nigeria as a diagnostic tool for common gastrointestinal disorders for some time now⁵⁻¹¹. From this study, the mean age of the patients who underwent OGD was 47.4 years. This is similar to the mean age of 47.7 years found by Olokoba et al⁵ in their patients in Egbe, North central, Nigeria. It is however slightly higher than the mean age of 46 years in the work of Al-Quorain et al⁶ in their Saudi patients in the eastern province of Saudi Arabia, and the mean age of 45 years found by Agbakwuru et al⁷ in Ife, South western, Nigeria. The mean age of 47.4 years from this study is also higher than the mean age of 37.8 years found by Danbauchi et al⁸ in Zaria, North western, Nigeria; and the mean age of 40.5 years found by Khurram et al⁹ in their Pakistani patients. Similarly, it is higher than the mean age of 39.3 years found by Samaila et al¹⁰ in Katsina, North western, Nigeria; the 43.5 years found by Aduful et al¹¹ in their Ghanaian patients; and the 36 years found by Taye et al¹² in their Ethiopian patients. The mean age of 47.4 years is however lower than the 56.4 years found by Irabor¹³ in their patients in Ibadan. From this study, more male patients underwent OGD in the period under review with a male to female ratio of 1.5:1. This is similar to that found by Danbauchi et al⁸ amongst their patients with a male to female ratio of 1.5:1. It is also similar to the findings of Malu et al

¹⁴ who found more male patients in their study in Zaria, North western, Nigeria. More male patients were also found to have undergone OGD in the works of Agbakwuru et al⁷ (53.4%), Al-Quorain et al⁶ (67.4%), Taye et al¹² (male:female, 2:1) and Irabor¹³ (male:female, 1.6:1). It is however different from that by Khurram et al⁹ who had a male to female ratio of 1:1.4. The differences in the mean age of the patients studied, and the differences in the ratio of male to female patients studied may be because of the obvious differences in sample size, the average age of the patients studied, the different geographical locations, and period of time when the studies were carried out.

The commonest indication for which patients were referred for OGD in this study was for dyspepsia, 45.6%. This is similar to the dyspepsia that was the commonest reason for referral for OGD in Zaria found by Danbauchi et al⁸ and Malu et al¹⁴ (78.1%). It is also similar to the Dyspepsia found to be the commonest indication for referral for OGD (42.6%) in the work of Khurram et al⁹, and that of Onyekwere et al¹⁵ in Lagos, Nigeria. Dyspepsia was also the commonest reason for OGD found by Taye et al¹². This is however different from the acute exacerbation of peptic ulcer disease (PUD) that was the commonest indication for referral for the procedure in Katsina by Samaila et al¹⁰ (90.4%), that found in Ife by Agbakwuru et al⁷ (67.6%), and that found by Olokoba et al⁵ in Egbe (59.1%). The differences in the commonest indication may be the fact that most peptic ulcer disease patients present with dyspepsia. It may also be due to differences in the terminologies used.

From this study, the next most common indication for OGD is upper gastrointestinal bleeding. This is also

the next most common indication for OGD as seen in the works of Khurram et al⁹(32.8%), Taye et al¹²(18.0%), Aduful et al¹¹(14.2%), Malu et al¹⁴(12.1%), and Onyekwere et al¹⁵.

Other indications for OGD found in this study are in the evaluation of patients with gastric outlet obstruction (GOO), gastric cancer, dysphagia, acute exacerbation of peptic ulcer disease, GORD etc, as shown in table 2. These are also some of the indications for the procedure as found by other workers such as Khurram et al⁹, Aduful et al¹¹, Malu et al¹⁴, Taye et al¹², Olokoba et al⁵, and Samaila et al¹⁰. The indications for OGD in Ilorin are therefore similar to that of other centres within and outside Nigeria.

CONCLUSION

The indications for referral for OGD in Ilorin are similar to that of other centres within and outside Nigeria. Dyspepsia is the commonest indication for OGD in Ilorin, Nigeria.

REFERENCES

1. **Peter BC, Christopher BW.** Practical gastrointestinal endoscopy. 4th Ed. London: Blackwell Science; 1996. p. 51-77.
2. **Jacques VD, William RB.** Endoscopy of the upper gastrointestinal tract. *N Engl J Med* 1999;341(23):1738-1748.
3. American Society for Gastrointestinal Endoscopy. Appropriate use of gastrointestinal endoscopy. *Gastrointest Endosc* 2000;52:831-870.
4. **Olokoba AB.** Prevalence of Cholelithiasis amongst Nigerians with Type 2 Diabetes Mellitus in Ilorin, Nigeria. WACP (Dissertation) 2005; 33-40.
5. **Olokoba AB, Bojuwoye BJ, Yusuf M, Olokoba LB, Wahab KW, Braimoh KT, et al.** Common indications for upper gastrointestinal tract endoscopy in ECWA hospital, Egbe, Nigeria: A preliminary report. *African Scientist* 2006; 7(4): 165-169.
6. **Al-Quorain A, Satti MB, Al-Hamdan A, al-Ghassab G, al-Freihi H, al-Gindan Y.** Pattern of upper gastro-intestinal disease in the eastern province of Saudi Arabia in endoscopic evaluation of 2,982 patients. *Trop Geogr Med.* 1991; 43(1-2):203-208.
7. **Agbakwuru EA, Fatusi AO, Ndububa DA, Alatise OI, Arigbabu OA, Akinola DO.** Pattern and validity of clinical diagnosis of upper gastrointestinal diseases in South-west, Nigeria. *Afr Health Sci.* 2006; 6(2):98-103.
8. **Danbauchi SS, Keshinro IB, Abdu-Gusau K.** Fifteen years of upper gastrointestinal endoscopy in Zaria (1978-1993). *Afr J Med Med Sci* 1999;28(1-2):87-90.
9. **Khurram M, Kharr HT, Hassan Z, Umar M, Javed S, Asghar T, et al.** A 12years audit of upper gastrointestinal endoscopic procedures. *J Coll Physician Surg Pak* 2003 Jun;13(6):321-314.
10. **Samaila AA, Banye S, Buhari S.** Upper GI endoscopic findings in patients at General Hospital, Katsina, Nigeria. Association for the study of the liver in Nigeria annual scientific conference Book of abstracts Jos. 2006; abstract no.2.7.
11. **Aduful H, Naaeder S, Darko R, Baako B, Clegg-Lampsey J, Nkrumah K, et al.** Upper gastrointestinal endoscopy at the Korle bu teaching hospital, Accra, Ghana. *Ghana Med J.* 2007;41(91):12-16.
12. **Taye M, Kassa E, Mengesha B, Gemechu T, Tsega.** Upper gastrointestinal endoscopy: a review of 10,000 cases. *Ethiop Med J.* 2004;42(2):97-107.
13. **Irabor DO.** Surgical gastrointestinal endoscopy in Ibadan, Nigeria. *Nigerian Journal of Surgical Research.* 2006;8(3-4):161-162.
14. **Malu AO, Wali SS, kazmi R, Macauley D, Fakunle YM.** Upper gastrointestinal endoscopy in Zaria, northern Nigeria. *West Afr J Med* 1990 ;9(4): 279-284.
15. **Onyekwere CA, Hameed A, Anomneze EE, Chibututu C.** Upper gastrointestinal endoscopy findings in Nigerians: a review of 170 cases in Lagos. *Niger Postgrad Med J.* 2008;15(2):126-129.