

Functional dyspepsia in Yola, Nigeria

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Original Article

ABSTRACT

Objective: Dyspepsia is a common disorder originating from the upper gastrointestinal tract, and is the most common indication for gastrointestinal endoscopy. Even though, functional dyspepsia (non-ulcer dyspepsia) is not life –threatening, it has profound clinical and economic effects, and influences the quality of life of sufferers. Data is scanty on functional dyspepsia from Nigeria. This study aims to determine the prevalence of functional dyspepsia in Yola, Nigeria.

Methods: This was a cross-sectional study carried out at the Gastroenterology unit of Federal Medical Centre, Yola from December, 2006 to October, 2010.

Patients with dyspepsia who had upper gastrointestinal endoscopy as part of their work-up were recruited. Their biodata, history and duration of dyspepsia were noted on a proforma. The spectrum of endoscopic findings was also noted.

Results: A total of 441 patients underwent upper gastrointestinal endoscopy out of which 299 patients had dyspepsia. One hundred and thirteen (37.8%) were males while 186 (62.2%) were females, giving a male to female ratio of 1:1.6. The age range was from 18 to 97 years with a mean of 47.6 ± 9.4 years. Clinically significant endoscopic findings were seen in 94.0% while functional dyspepsia was seen in 18 patients (6.0%).

Conclusions: Functional dyspepsia was seen in only a minority of patients with dyspepsia.

Keywords: Functional dyspepsia, endoscopic, Nigerians

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La dyspepsie fonctionnelle à Yola au Nigeria

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Article Original

RÉSUMÉ

Contexte de L'Étude: La dyspepsie est un problème méga-gastro-intestinal communé provenant du tractus gastro-intestinal supérieur. Même si, la dyspepsie sans ulcère (dyspepsie non-ulcéreuse ou la dyspepsia fonctionnelle) n'est pas une maladie mortelle, elle a des effets cliniques et économiques profonds et influe sur la qualité de vie des patients. Il y a un manque de données sur la dyspepsia fonctionnelle du Nigeria. Le but de cette étude est de déterminer la prévalence de la dyspepsia fonctionnelle chez les patients dyspeptiques à Yola, Nigeria.

Méthodes: C'était une étude en milieu hospitalier et transversal réalisée à l'unité gastro-entérologie du centre médical fédéral, Yola de Décembre 2006, à Octobre, 2010. Les patients avec des caractéristiques cliniques de la dyspepsie qui ont subi un endoscope gastro-intestinal supérieur dans le cadre de leur travail ont été recrutés. Leur bio-informatique, histoire et la durée de la dyspepsie ont été notées sur une pré-forme. Le spectre des résultats endoscopiques a également été noté.

Résultats: Un total de 441 patients ont été référés pour l'endoscopie gastro-intestinale supérieure dont 299 patients avaient dyspepsie 113 (37.8%) étaient hommes alors que 186 (62.2%) étaient femmes, donnant un ratio homme-femme sur 1:16. Leur âge variait de 18 à 97 ans avec une moyenne de 47.694 ans. Cliniquement constatations endoscopiques significatives ont été observées chez – patients (94.0%) toute dyspepsia fonctionnelle a été observée chez 18 patients 6.0%.

Conclusion: La dyspepsia fonctionnelle a été observée que dans une minorité de patients souffrant de dyspepsie.

Mots Clés: Dyspepsie fonctionnelle, endoscopique, Nigériens.

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INTRODUCTION

Dyspepsia is a frequently recurring epigastric pain or discomfort originating in the upper gastrointestinal (GI) tract (1). Other upper GI symptoms such as heartburn, postprandial fullness, and early satiety may be associated with it (2). Dyspepsia occurs frequently, and is the most common indication for upper GI endoscopy (2,3). Dyspepsia is also grouped into ulcer and non-ulcer dyspepsia (4). Acid peptic disorder (APD) is a group of GI disorders in which acid and pepsin play a major role (4). Thus, APD encompasses conditions such as peptic oesophagitis usually as gastro-oesophageal reflux disease (GORD), gastritis, duodenitis or gastroduodenitis in addition to peptic ulcer disease, which may be gastric or duodenal (4). Dyspepsia is the classic symptom of APD. Upper GI endoscopy is the investigation of choice in upper GI disorders which often present with dyspepsia (5,6).

F u n c t i o n a l d y s p e p s i a (FD)(dyspepsia without an ulcer or non-ulcer dyspepsia) is 'the presence of symptoms thought to originate in the upper GI region in the absence of any organic, systemic or metabolic diseases that is likely to explain the symptoms' (7). FD is diagnosed at least twice as often as peptic ulceration (8). The pathogenesis of FD is unknown, although gastric acid, duodeno-gastric reflux, heredity, environmental and psychological factors may play a role (8).

There have been numerous reports of the prevalence of FD. In one study, the prevalence of FD in the Scandinavian region was 20-25% in the general population (9). Other studies in USA and UK reported prevalence rates of 25-40% (9-14). Majority of these studies suggested that FD represents more than 50% of all dyspepsia patients (15). A hospital-based study in Saudi Arabia found a prevalence of FD of 40% (16). Although FD is not a life-threatening disease, many studies have emphasized its clinical and economic effects such as loss of manpower hours, and its influence on the quality of life of sufferers (15,17-21).

Data is scanty on the prevalence of FD in black Africans. We therefore determined the prevalence of FD amongst dyspeptic patients in Yola, Nigeria.

MATERIALS AND METHODS

This was a hospital-based cross-sectional study conducted at the Gastroenterology unit of Federal Medical Centre, Yola from December, 2006 to October, 2010. Out-patients, in-patients, and referred patients with dyspepsia were recruited. Patients with dyspepsia who underwent upper GI endoscopy as part of their work-up were consecutively recruited after a written and informed consent. All adult consenting patients with dyspepsia were recruited while patients who have had histamine 2 (H2) receptor blockers or proton pump inhibitors (PPIs) in the previous two weeks were excluded. Their biodata, history and duration of dyspepsia were noted on a proforma. The spectrum of endoscopic findings was also noted.

The oesophagogastroduodenoscope in use at the endoscopy unit is a Fujinon (model FG-1Z) with an accompanying light source and an Olympus videoscope with a GIF-QX 240 gastroscope and a CLV- U40 light source. All patients had upper GI endoscopy carried out on them after an overnight fast, and they had plain xylocaine (10%) applied to their pharynx prior to the procedure. 10mg of intravenous diazepam was also given to induce a short term amnesia in those in whom it was not contra-indicated. Thereafter the procedure was carried out according to standard protocol. Data was analysed, and the results presented as ratios and percentages.

RESULTS

Four hundred and forty-one (441) patients were referred for upper GI endoscopy out of which 299 patients had dyspepsia. One hundred and eighty-six (62.2%) were females while 113 (37.8%) were males giving a female to male ratio of 1.6:1. There was an increase in the age of the

study participants till the fifth decade i.e 40-49 years, thereafter there was a decline. The age range was from 18 to 97 years with a mean of 47.6 ± 9.4 years (Table 1).

The commonest endoscopic finding was gastro-duodenitis seen in 190 (63.5%) patients while the least common findings were gastric and duodenal diverticulum seen in 1(0.3%) patient. A clinically significant endoscopic finding (CSFs) which reflects the organic lesions seen at endoscopy in the dyspeptic patients was 281(94.0%). Normal upper GI endoscopic study (functional dyspepsia) was seen in 18(6.0%) patients (Table 2).

DISCUSSION

The main aim of our study was to determine the occurrence of FD amongst patients with dyspepsia in Yola, Nigeria. From our study, 299 patients had dyspepsia comprising 37.8% males and 62.8% females with a mean age 47.6 ± 9.4 years. This pattern is similar to that of Jemilohun et al (22) in Ibadan, South-west Nigeria where they studied more females than males, and the mean age in their study was 49.2 ± 7.4 years. However, our finding is different from that of Tijjani et al (23) in Kano, North-west Nigeria whose study population comprised more males than females, and with a mean age of 37.8 years.

From our study, clinically significant endoscopic findings (CSFs) was seen in 94.0% of dyspeptic patients. This is higher than the 82.1% found by Mustapha et al (5) in Maiduguri, North-eastern Nigeria. It is also higher than the 65.5% found by Tijjani et al (23) in Kano. Furthermore, it is higher than the 86.0% and 58.8% found by Al-Humayed et al (2) and Thompson et al (24) in Saudi Arabia and Canada respectively. The finding in our study, contrasts sharply with that of Olubuyide et al (25) in Ibadan, South-western Nigeria who found that majority (55%) of their dyspeptic patients did not have any finding at endoscopy. The observed differences in CSFs in patients presenting with dyspepsia may be due to differences in

sample sizes, and patient selection. Accessibility to endoscopic services, prior treatment for dyspepsia, presence of *H. pylori* infection and the time lag between the occurrence of dyspepsia and the performance of upper GI endoscopy may also play a role.

From our study, the prevalence of FD was 6.0%. There is a paucity of local and regional data on FD with which to compare. This finding of 6.0% prevalence for FD is lower than that seen in the study by El-serag and Talley (14) where a prevalence of 11.5-14.7% was found. It is also lower than the findings of Bernersen et al (26) where a prevalence of 10-17.2% was seen among Scandinavians. Furthermore, Mahadeva and Goh (27) found a prevalence of 11-29.2%, while the study carried out by Shaib and El-serag (13) revealed a prevalence of FD of 29.2% among a cohort of multi-ethnic volunteers with dyspepsia in the United States. Our study was hospital-based, and the prevalence rate of FD from our study is lower than the earlier cited ones (9,13,15). Delayed presentation of our patients to hospital, accessibility and affordability of endoscopic services, and prior intake of medications for dyspepsia might have influenced our endoscopic findings and accounted for this wide spectrum of findings at endoscopy. Differences in geographical location, environmental and lifestyle habits such as caffeine intake, smoking, socio-economic status, herbal medications, and use of NSAIDs may also have influenced our findings. The presence of *H.pylori* infection which varies greatly among population groups within the same country may also be an important factor.(27,28) This infection is reported to be more common in developing countries and varies between 70-90% as compared to 20-25% in developed countries (5,23,28-30). Various studies have shown that Nigeria has a high prevalence rate of *H.pylori* infection (22,30-32). Perhaps some yet to be identified factors may also be at play in influencing the low prevalence of FD amongst dyspeptic patients in our study.

The main limitation in our study, is the relatively small sample size which may not be unconnected to the high cost of upper GI endoscopy in our environment. We also did not study the prevalence of *H. pylori* in our patients.

CONCLUSION

Majority of our patients with dyspepsia had CSFs, while only a minority had FD. Larger, and more multi-centred studies which are population –based is advised to validate these findings especially in black Africans.

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Table 1: Age and gender distribution of patients

Age groups (Years)	Male(n)	Female(n)	Total (n)(%)
<19	1	4	5(1.7)
20-29	16	25	41(13.7)
30-39	26	41	67(22.4)
40-49	29	44	73(24.4)
50-59	21	23	44(14.7)
60-69	11	30	41(13.7)
70-79	5	17	22(7.4)
80-89	3	2	5(1.7)
90-99	1	0	1(0.3)
Total	113(37.8)	186(62.2)	299(100.0)

Table 2: Spectrum of endoscopic findings

Endoscopic findings	Frequency (n)(%)
Gastroduodenitis	190(63.5)
Reflux Oesophagitis	81(27.1)
Gastritis	41(13.7)
Duodenal ulcer	15(5.0)
Gastric erosion	15(5.0)
Hiatus hernia	12(4.0)
Gastric ulcer	11(3.7)
BarrettsOesophagus	10(3.3)
Duodenitis	6(2.0)
Oesophageal candidiasis	6(2.0)
Gastric cancer	4(1.3)
Gastric polyp	4(1.3)
Oesophageal cancer	3(1.0)
Gastric diverticulum	1(0.3)
Duodenal diverticulum	1(0.3)
Clinically significant findings	281(94.0)
Normalstudy (Functional dyspepsia)	18(6.0)