

Practice of Upper Gastrointestinal Endoscopy at the Mother-Child Hospital in Bamako/MALI: About 465 Cases

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Abstract

Introduction: Upper gastrointestinal (GI) endoscopy is an examination that involves exploring the upper part of the digestive tract using an endoscope. Our study was aimed to evaluate the practice of Upper GI endoscopy at the mother-child hospital in Mali. **Patients and Methods:** This was a descriptive retrospective study on reports of Upper GI endoscopy results in the digestive endoscopy unit at the mother-child hospital in Bamako from January to December 2018. **Results:** Endoscopy was performed in 465 patients including 231 males and 234 females. The sex ratio was 0.98. Patients were aged 46.69 years old on average with the extremes of 8 and 90 years old. Epigastralgia was the main referral in 50.5%. Endoscopy was normal in 24.7%. The main diagnostics were duodenogastric reflux in 32.5% and gastritis in 14.4%. **Conclusion:** The practice of Upper GI endoscopy at the mother-child hospital in Mali has allowed the exploration of the upper digestive tract to contribute to the diagnosis of esogastroduodenal lesions.

Keywords

Upper GI Endoscopy, Indications, Mother-Child Hospital, Mali

1. Introduction

Esophagogastroduodenal fibroscopy is a method of visual exploration of the up-

per digestive tract (the esophagus, stomach, and the duodenum). Upper digestive endoscopy or gastroscopy was initially developed as a diagnostic tool and had become a treatment tool (extraction of foreign bodies, dilations, polypectomies, sclerotherapy and thermo-coagulation) [1]. It is done through natural channels or after an incision to enter certain cavities in the body. Depending on the techniques used (intraluminal, pancreatobiliary or transluminal), the gestures are performed under local or general anesthesia. Studies on the practice of this examination have been carried out in Bamako by Maïga *et al.* 1996 [2] and Sylla *et al.* 2010 [3]. In a study of Fibroscopy conducted by Sylla *et al.* the male sex was predominant at 52%, the average age of patients was 42.25 years with extremes of 5 and 92 years and the age group 46 - 60 years was the majority [3]. The most common insinuation found in the Sylla *et al.* study was epigastralgia in 96% of cases and endoscopy was macroscopically normal in 49.0% of cases [3]. However, none of these previous studies investigated the practice of upper digestive endoscopies in the mother-child hospital in Mali. In this study, our aim was to determine the main socio-demographic data of patients referred to the endoscopy unit of the mother-child hospital in Mali for esogastroduodenal endoscopy and to assess the clinical information for referrals as well as the results of the endoscopy.

2. Material and Methods

This was a retrospective, descriptive study on the results of reviews of esogastroduodenal fibroscopy performed in the digestive endoscopy unit of the hepato-gastroenterology department of the Mother-Child Hospital of Bamako from January to December 2018. Inclusion criteria: All patients received during the study period and who were seen in upper gastrointestinal endoscopy. Exclusion criteria: all patients who received for other endoscopy. Endoscopic examinations were carried out by a team made up of two gastroenterologists and a nurse. The endoscopy was performed under local oropharyngeal anesthesia with oral xylocaine gel. The equipment used was an Olympus optical fiberscope with an axial vision and in cold light (Olympus GIF-XQ30).

The patients were seen endoscopically in the morning on an empty stomach. Oral xylocaine gel was used for oropharyngeal anesthesia before each endoscopy. The biopsy pieces were packaged in vials, fixed with 10% formalin and given to the patients for shipment to one of the various anatomo-pathology laboratories in Bamako. The disinfection of the equipment after use was carried out with a solution of Hexanios® and sterilization in a solution of Steranios® 2%. The socio-demographic data (last and first names, age, sex, and address), the indications for upper gastrointestinal endoscopy, the detailed endoscopic report and the conclusion were recorded. Informed and verbal consent was obtained in all of our patients. Data were typed in EXCEL 2013 and analyzed using SPSS software 20.

The chi-square test was used for comparison with a p value <0.05 considered significant.

3. Results

We recorded 465 patients including 231 males and 234 females *i.e.* a sex ratio of 0.98 (Table 1). The mean age was 46.69 ± 7.5 years old with extremes of 8 and 90 years old. The most represented age group was 31 - 40 years old (Table 2). Housewives accounted for 31.5%. The main indications were epigastralgia in 50.5% (Table 3). Esogastroduodenal fibroscopy was normal in 24.7%. Tumors were found in 9.03% and inflammatory lesions in 20.7%. The lesions were esophageal in 11.83%, gastric in 27.1% and duodenal in 2.3%. In our study, inflammatory pathology was predominant in 296 patients or 63.66%. This result is comparable to those of Laté *et al.* (56.3%) [4]; Alandry (49.5%) [5] and Ismaila (39.3%) [6]. This could be explained by the frequency of bile reflux 53.5% of cases in our study. According to the site, esophageal pathologies represented 11.83%, gastric pathologies 27.1% and duodenal pathologies 2.3% (Table 4).

4. Discussion

Our patients came from the hospital setting and from the various health centres across the country. We found a female predominance as in the Togolese and Nigerian series [1] [2] while Sylla B [3], other African [5] [7] and Asian [8] series found a male predominance. This female predominance in our study could be explained by the fact that the majority of patients attending the structure were women [9]. Our patients were adults with an average age of 46.69 years old and

Table 1. Gender of patients.

Gender	Frequency	Percentage
Female	234	50.3%
Male	231	49.7%
Total	465	100%

Table 2. Age ranges of patients referred for the upper digestive endoscopy.

Age ranges (years old)	Frequency	Percentage
<20	11	2.37%
21- 30	73	15.7%
31 - 40	112	24.09%
41 - 50	90	19.35%
51 - 60	78	16.77%
61 - 70	71	15.27%
71 - 80	19	4.09%
>80	11	2.36%
Total	465	100%

Table 3. Reasons for referrals for esogastroduodenal fibroscopy.

Reasons for referrals	Frequency	Percentage
Epigastralgia	235	50.54%
Abdominal pain	65	13.98%
Signs of portal hypertension	38	8.17%
Dyspepsia	31	6.67%
Vomiting	20	4.30%
Gastrointestinal bleeding	19	4.09%
Dysphagia	15	3.23%
Retrosternal pain	12	2.58%
Alteration of the general condition	7	1.94%
Anterior chest pain	7	1.51%
Orificial syndrome	6	1.29%
Anemia	5	1.08%
Epigastric mass	3	0.65%
Others*	11	2.37%
Total	465	100%

*Others: ATDC gastrectomy (n = 3), cardiomyotomy (n = 1), gastric ulcer (n = 6), polyp (n = 1), cholestasis (n = 1).

Table 4. Sites of the pathology found on the endoscopy.

Site of the pathology	Frequency	Percentage
Esophagitis	27	5.9
Esophageal tumor	14	3
Esophageal varices	12	2.6
Hiatal hernia	1	0.2
Megaesophageal recurrence	1	0.2
Subtotal	55	11.83
Gastritis	67	14.4
Gastric tumor	28	6
Gastric ulcer	14	3.01
Stomach Portal hypertensive gastropathy	10	2.1
Polyps	6	1.3
Stomitis	1	0.2
Sub total	126	27.1
Duodenal ulcer	9	1.9
Duodenum Duodenitis	2	0.4
Sub total	11	2.3

the most represented age group was 31 - 40 years old. This result is different from that obtained by Sylla B [3] for which the age group most represented was 46 - 60 years old. This is due to the size of the Sylla B study population (n = 1130) [3]. On the other hand, our result is close to data from most African [1] [3] [7] [8] and Asian [10] [11] studies. This could be explained by the fact that the majority of the population of developing countries is young. Upper digestive tract fibrosis was normal in 115 patients (24.7%). Our result is comparable to that obtained by Laté *et al.* or 22.29% [4]. This rate is higher than that noted by Ismaila (15.6%) [6] but lower than that rated by Taye (28%) [12], Aduful (41.1%) [13] and Shah (78.5%) [14]. Epigastralgiac were the main indication of high digestive fibrosis in our study as in the other series [4] [5] [7] [13]. Duodenogastric reflux was the main result observed in 151 patients or 32.5%. This result is comparable to that of Laté *et al.* [4]. In our study, inflammatory pathology pred was predominated in 296 patients or 63.66%. This result is comparable to that of Laté *et al.* (56.3%) [4]; Alandry (49.5%) [5] and Ismaila (39.3%) [6]. This could be explained by the frequency of bile reflux 53.5% of cases in our study. According to the site, esophageal pathologies accounted for 11.83%, gastric pathologies 27.1% and duodenal pathologies 2.3% (Table 4).

5. Conclusion

Esogastroduodenal fibroscopy is an important complementary examination in the management of digestive pathologies in general. Its daily clinical His practice at the Mother-Child Hospital in Mali has made it possible to highlight the contribution of fibroscopy into the diagnosis of various digestives pathologies.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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