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Epidemiological Aspects of Peptic Ulcer Disease in Mopti (Mali)

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Abstract **Original Research Article**

Introduction*:** Peptic ulcer disease is a benign condition, but its severity is linked to the risk of complications, hemorrhage, perforation, stenosis and gastric cancer. The objective of this work was to describe the epidemiological aspects of peptic ulcer disease in Mopti (Mali). ***Methods and patients: From 1st January 2019 to December 2021, we carried out a descriptive cross-sectional study on cases of peptic ulcer disease in patients seen in upper digestive endoscopy in the medical department of the Sominé Dolo hospital in Mopti and the BRICO II medical center in Sévaré. Were included in this study, all patients with a peptic ulcer objectified by upper digestive endoscopy with biopsy for histological examination. Were not included, cases of gastric ulceration related to cancer, lymphoma, granuloma. ***Result***: During the study period, 1894 upper digestive endoscopies were performed and 107 gastroduodenal ulcers were diagnosed, representing a frequency of 5.64%. The patients were divided into 65 men (60.75%) and 42 women (39.25%), i.e. a sex ratio of 1.54. Housewives and farmers were respectively represented (36.4%) and (19.6%). The lesions were located on: the antrum (70.10%), the bulb (25.20%), the antrum and bulb (4.70%). The other gastroduodenal affections found were: erosive duodenitis (2.8%), gastropathy erythematous antral (7.8%), gastropathy corporeal - antral erythematous (15.8%), mosaic PH gastropathy (5.6%). Helicobacter _ pylori was found in 96% of patients and all patients had chronic, active gastritis more or less atrophic according to the Sydney classification. ***Conclusion:*** Our study revealed a high frequency of Helicobacter pylori. The proliferation of digestive endoscopy centers makes it possible to better improve diagnosis and management at the regional level.

Keywords: Ulcer disease, gastroduodenal, Mopti, Mali.

INTRODUCTION

Peptic ulcer disease has experienced a revolution in its development and treatment over the past 20 years, since the discovery of Helicobacter pylori by Marshall and Warren [1]. It is a multifactorial pathology resulting from an imbalance between the aggression factors and the defense factors of the gastroduodenal mucosa including Helicobacter pylori (HP) plays a key role [2].

Its presence is almost constant in chronic gastritis with or without gastroduodenal ulcers. It is responsible for the transformation of the normal mucosa into a mucosa of chronic superficial gastritis and then atrophic gastritis [1].

It is a benign condition but its severity is linked to the risk of complications (haemorrhage, perforation, stenosis and gastric cancer [3]. Several studies have been carried out on this pathology worldwide and in Africa [4-6], but none has been carried out on this subject in Mopti (Mali).

There are both scientific and political reasons for undertaking studies on this condition given the lack of data in the Mopti region.

Under these conditions, a better knowledge of this condition can improve care during routine consultations.

The objective of this work was to describe the epidemiological aspects of peptic ulcer disease in Mopti (Mali).

PATIENTS AND METHODS

From 1st January 2019 to December 2021, we carried out a descriptive cross-sectional study on cases of peptic ulcer disease in patients seen in upper digestive endoscopy in the medical department of the Sominé Dolo hospital in Mopti and the BRICO II medical center in Sévaré.

Were included in this study, all patients with a peptic ulcer objectified by upper digestive endoscopy with biopsy for histological examination.

Were not included, cases of gastric ulceration related to cancer, lymphoma, granuloma.

A questionnaire was applied to each case and the variables collected were as follows:

- Socio-demographic characteristics (age, sex, profession, origin),
- the reason for the endoscopy,
- Data from esogastroduodenal fibroscopy: the seat of the ulcer (anterior or posterior bulbar, prepyloric, antral, fundic or of the lesser curvature), the shape of the ulcer (round, linear, irregular, salami), the number of ulcers, other gastro-duodenal affections.
- Anatomopathological data

Data were entered using Epidata 3.1 software and then transported and analyzed using Stata 14 software.

The study was carried out in accordance with the requirements of the Declaration of Helsinki and in accordance with the bioethical recommendations recorded in appendix C of standard ISO15189 v. 2007.

RESULTS

During the study period, 1894 upper digestive endoscopies were performed and 107 gastroduodenal ulcers were diagnosed, representing a frequency of 5.64%. The patients were divided into 65 men (60.75%) and 42 women (39.25%), i.e. a sex ratio of 1.54.

Patients under the age of 25 accounted for 5.6%, the age group (26-55 years) accounted for 56.1% and the age class (56-80 years) accounted for 38.3%.

According to profession, the patients were distributed as follows: traders (8.4%), farmers (19.6%), breeders (9.3%), housewives (36.4%), civil servants (15.9%), marabouts (2.8%), workers (7.4%).

According to the origin of our patients, 64.49% came from rural areas and 35.51% came from urban centers.

The reasons for consultation were: epigastralgia (73.8%), anemia (8.4%), vomiting (15.9%), hematemesis (5.4%), ascites (9.3%), dysphagia (1.9%), weight loss (0.9%).

The lesions were located on: the antrum (70.10%), the bulb (25.20%), the antrum and bulb (4.70%).

The other gastroduodenal affections found were: erosive duodenitis (2.8%), gastropathy erythematous antral (7.8%), gastropathy corporeal - antral erythematous (15.8%), mosaic PH gastropathy (5.6%).

Helicobacter _ pylori was found in 96% of patients and all patients had chronic, active gastritis more or less atrophic according to the Sydney classification.

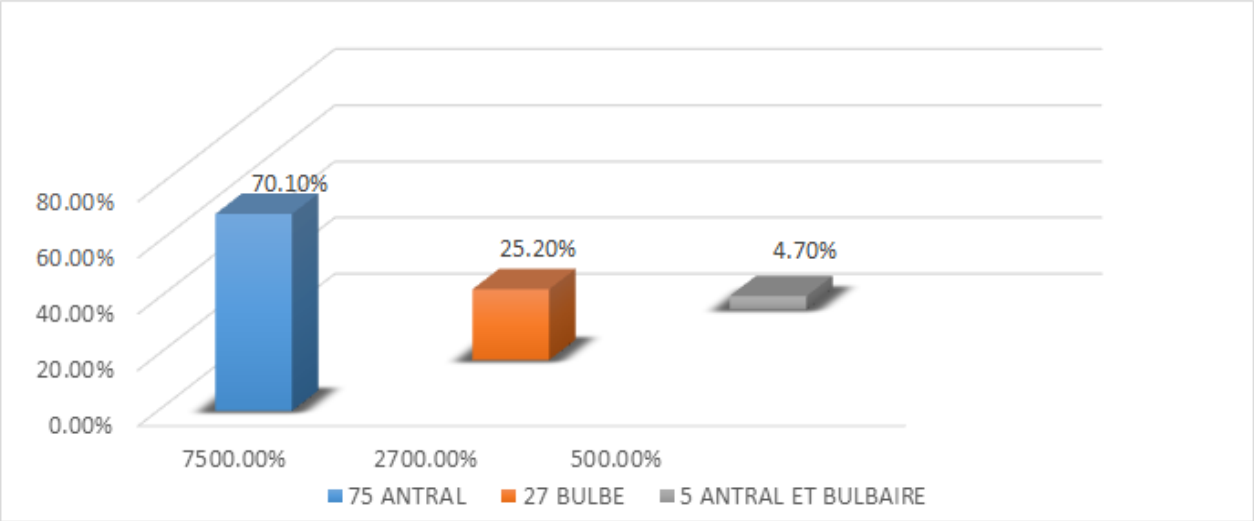

Figure: Representation of patients according to the site of the lesion

Table: Distribution of patients according to other associated gastro-duodenal conditions

Other associated gastroduodenal conditions	Effective	Percentage
Erosive duodenitis	3	2.8
Erythematous antral gastroraphy	8	7.5
Corporeoantral gastrography erythemato - erosive	17	15.8
Mosaic PH gastrotherapy	6	5.6
Total	34	31.77

DISCUSSION

To our knowledge, this is the first study carried out on peptic ulcer disease in Mopti (Mali). The objective of this work was to describe the epidemiological aspects of peptic ulcer disease in Mopti (Mali).

Our study was based solely on patients who consulted at the Sominé Dolo hospital in Mopti and at the Brigo II clinic in Sévaré, which is not representative of the population of the Mopti region. It was not possible for us to collect all the desired information in relation to the variables of interest on the consultation sheets. Also, for lack of sufficient resources or out of fear, some patients were unable to undergo endoscopic explorations. Despite these limitations, this study allowed us to assess the main epidemiological and clinical characteristics of peptic ulcer disease in our workplace.

Peptic ulcers accounted for 5.64% of all digestive endoscopies, much lower than that found by others [4, 7-10]. It is underestimated because some patients have not accepted the endoscopic exploration they fear as reported by some studies [11, 12].

These variations in figures in the studies can be explained by recruitment biases; making comparisons difficult if not impossible.

All ages are affected by this condition, but it is rare before 15 years and after 60 years. The most affected age group is between 26 and 55 years old (56.1%), thus confirming well-known facts that make peptic ulcer a disease of young people.

Similar results have been reported by other studies in some African countries [13-15]. We obtained a slight male predominance with a sex ratio of 1.66 and this predominance is explained by the fact that men are more exposed to stressful situations than women.

Peptic ulcer disease in social strata with a low standard of living (housewives, farmers) and the frequent association with gastropathy antral or corporeoantral have been reported by other studies [13, 15]. This fact could be explained by Helicobacter infection Pylori in connection with the low socio-economic level, which is acquired from a young age in our regions and which is involved in ulcerogenesis. This thesis has just been consolidated by our study, with the presence of this bacterium in 96% of our patients affected by this condition.

The Duodenal Ulcer/Gastric Ulcer ratio is 0.36. This study is in line with studies carried out by other authors [16, 17].

However, the Mopti region, being the center of Mali, has for more than a decade been the site of confrontation between the regular armed forces and armed terrorist groups. This state of permanent stress at the population level could explain this high rate of gastric lesions by acid hypersecretion.

However, some work carried out in Malaysia [18] and Burundi [19] found that duodenal locations were predominant.

These differences in the ratio can be explained by a recruitment bias, since the durations of the studies are not identical.

CONCLUSION

Our study revealed a high frequency of Helicobacter pylori. The proliferation of digestive endoscopy centers can make it possible to better improve diagnosis and management at the regional level.

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