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Clinical and lifestyle profile of patients with dyspepsia assisted by the continuum of care at a public outpatient clinic in Belo Horizonte

Clinical and lifestyle profile of patients with dyspepsia assisted by the continuum of care at a public outpatient clinic in Belo Horizonte

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ABSTRACT

Introduction: Dyspepsia is part of a heterogeneous group of symptoms that affect a large proportion of patients with clinical complaints in the upper abdomen, often resulting in an overload of health services. **Objective:** To trace the clinical and lifestyle profile of patients diagnosed with dyspepsia assisted by the Continuous Line of Care at a gastroenterology outpatient clinic in Belo Horizonte, Minas Gerais, Brazil. **Method:** A retrospective cross- sectional study of 221 medical records of patients diagnosed with dyspepsia. Clinical, social and lifestyle information was collected. Statistical analysis was carried out using R software version 4.2.1. Categorical variables were presented descriptively, using absolute and relative frequency distribution. Continuous variables were described by mean and standard deviation (SD). **Results:** Of the patients included, 75% (n=166) were female and had a mean age of 58 ± 14.6 years. The average Body Mass Index (BMI) of the patients evaluated was 28.6 ± 6.1 kg/m^2 . When the patients' lifestyles were assessed, it was observed that alcohol consumption was more frequent (59.73%) than smoking (28.5%), and most of the patients were sedentary (57%). **Conclusion**: The dyspepsia patients evaluated in this study were predominantly overweight adult women who consumed alcohol and led sedentary lifestyles.

Keywords: Dyspepsia; Prevalence; Lifestyle; Outpatient care.

INTRODUCTION

Dyspepsia is part of a heterogeneous group of symptoms affecting the upper abdomen.[1] The Rome IV criteria, developed by the ROMA Foundation, establishes the diagnosis of this clinical condition with the following characteristics: postprandial fullness, early satiety and/or burning epigastric pain.[2] Dyspepsia is a prevalent clinical condition that directly impacts patients' quality of life. Treating this condition can place a heavy burden on health services.[3]

Dyspepsia can be classified into dyspepsia secondary to an organic cause and functional dyspepsia. Among the causes of secondary dyspepsia are peptic ulcer disease, esophagogastric cancer, biliary pain and drug-induced dyspepsia.[4] In this perspective, functional dyspepsia is a diagnosis of exclusion, being considered a chronic functional disorder of the gastrointestinal tract with no cure, after investigating possible organic causes.[5] Functional dyspepsia can be caused by a state of neuronal hypersensitivity, delayed gastric emptying and other issues related to gastrointestinal motility.1 The most frequent symptoms are postprandial fullness (68% to 86%), bloating in the upper abdomen (68% to 84%), epigastric pain (68% to 74%), eructation (50% to 60%), nausea (39% to 65%) and vomiting (23% to 31%).[6,7] Sahan et al. (2018) associate dyspepsia with social and emotional issues and Long et al. (2023) suggest that this condition is included in a syndrome that overlaps with other comorbidities. [8,9]

All over the world, studies have reported a significant number of individuals diagnosed with functional dyspepsia in the US, Canada and the UK.10 The frequency of secondary dyspepsia, according to the Rome IV Criteria, was 12% in the USA and 8% in the UK and Canada.11 In Brazil, according to data provided by UNASUS, around 25% of the population suffers from these symptoms. However, population-based epidemiological studies on the epidemiological profile of Brazilians diagnosed with dyspepsia are rare.[12]

Given the need to understand the characteristics of patients in order to improve their adherence to continuous care treatment, as well as continuous improvement in the clinical management of diseases that negatively impact the quality of life of users of the Unified Health System (SUS) living with chronic diseases, the aim of this study was to trace the clinical and lifestyle profile of patients with a previous diagnosis of dyspepsia assisted by the continuous care line of a public gastroenterology outpatient clinic.

METHODS

Study design

This is a retrospective cross-sectional study carried out with data from the medical records of patients assisted by the care line of an outpatient clinic in Belo Horizonte, from November 2023 to December 2023. This study is part of the research "Evaluation of the gastrointestinal comprehensive care line of the Minas Gerais Medical Sciences Outpatient Clinic" developed in the Postgraduate Program in Health at the Minas Gerais Medical Sciences School in partnership with the Extension and Teaching sector linked to the undergraduate medical course at the same school. This research was previously approved by the Research Ethics Committee of the Faculty of Medical Sciences of Minas Gerais (CAAE: 67124822.0.0000.5134 - 14/02/2023) and was governed by Resolution 466/12 of the National Health Council.

Sample

The medical records were selected on a non-probabilistic basis, respecting the patient's decision whether to take part in the study. The study included adults aged between 19 and 90, who were referred from the Basic Health Units to the continuum of care of a gastroenterology outpatient clinic in Belo Horizonte. Patients eligible for the study sample were required to have been diagnosed with dyspepsia by December 2023. Patients without a dyspepsia diagnosis who were referred to the line of care were excluded from the study.

Research tools

Data was collected using the MV PEP electronic platform provided by the institution. The most recent medical records of patients being monitored in the line of care were evaluated. The data was tabulated in

Excel® 2013 spreadsheets by double typing to ensure data consistency.

The following variables were collected age (in years), gender (female or male), smoking (smoking load), alcohol consumption (quantification of alcohol consumption), weight (in kilograms), height (in centimeters), body mass index (BMI) (in kg/m²), blood pressure (in millimeters of mercury), heart rate (in beats per minute), medications in use and how many classes of medication, saturation (in oxygen saturation), physical activity and frequency of activity, triglycerides, HDL cholesterol, LDL cholesterol, glutamic oxalacetic transaminase (AST), glutamic pyruvic transaminase (ALT), fasting blood glucose and glycated hemoglobin (HbA1c).

Statistical Analysis

Statistical analysis was performed using R statistical software version 4.2.1. Categorical variables were presented descriptively, using absolute and relative frequency distribution. The distribution of continuous variables was analyzed using the *Shapiro-Wilk* test. The confidence interval adopted was 95%. Parametric continuous variables were described by mean and standard deviation (SD) and non-parametric continuous variables were described by median and interquartile range.

RESULTS

Of the 226 medical records selected for the study, 221 had complete information. Of these, 75% (n=166) were female, aged between 19-90 years and with a mean age of 58 years, as can be seen in more detail in Table 1.

Regarding the anthropometric measurements taken, the average body weight, height and BMI found were 72.5 ± 16.2 kg, 160 ± 8.3 cm and 28.6 ± 6.1 kg/m², respectively. When we evaluated BMI categorically, we found that most of the sample was overweight (35.5% (n=43) were overweight and 36.4% (n=44) were obese).

Alcohol consumption and smoking were reported by 59.7% (n=132) and 28.5% (n=63) of patients, respectively. About smoking, there was an average of 29 ± 13.6 years of smoking and 1 pack a day. Many patients (57%; n=127) reported not doing any physical activity and were classified as sedentary.

As for the analysis of laboratory tests in this sample, despite the wide variation in triglyceride levels (34 to 687 mg/dL), the average remained within the ideal range, at 142 ± 95.6 mg /dL. HDL and LDL levels were within the normal range with averages of 54 ± 14.6 mg /dL and 106.6 ± 38.2 mg/dL, respectively. Fasting blood glucose and glycated hemoglobin were elevated with means equal to 101 ± 25.3 mg/dL and 6% (n=89). The liver injury markers glutamic transaminase oxalacetic (ALT) and aspartate aminotransferase (ALT) showed averages of 26 ± 26.6 U/L and 21 ± 14.1 U/L, meaning no acute liver injury or worsening of chronic conditions.

Table 1 - Baseline characteristics of patients with dyspepsia receiving continuous care at a Gastroenterology Outpatient Clinic, Belo Horizonte, 2023.

Variables	Mean ± SD
Age	57.7 ± 14.6
Weight	72.5 ± 16.2
Height	160.1 ± 8.3
BMI	28.6 ± 6.1
Smoking (years)	29.6 ± 6.1
Smoking (packs)	1 ± 0.6
HR	72.8 ± 12.1
HDL	54 ± 14.6
LDL	106.6 ± 38.2
Triglycerides	142 ± 95.6
AST	26.1 ± 26.6
ALT	21.4 ± 14.1
Fasting blood sugar	101.9 ± 25.3
HbA1c	6 ± 0.97

Variables	n (%)
Sex	
Female	166 (75.1%)
Male	54 (24.43%)
Not described	1 (0.45%)
Categorical PA	
Normotensive	93 (42.08%)
Hypertensive	100 (45.25%)
Not described	28 (12.67%)
Smoking	
Yes	63 (28.51%)
No	145 (65.61%)
Not described	13 (5.88%)
Alcoholic	
Yes	73 (33.03%)
No	132 (59.73%)
Not described	16 (7.24 %)
Physical exercise	
Yes	56 (25.34%)
No	127 (57.47 %)
Not described	38 (17.19%)
BMI	
Malnourished	1 (0.45%)
Eutrophic	33 (14.93%)
Overweight	43 (19.46%)
Obese	44 (19.91%)
Not described	100 (45.25%)
Medication classes	
Less than 3	50 (22.62%)
Between 3 and 5	99 (44.80%)
6 or more	35 (15.84%)
Not described	37 (16.74%)

Legend: Standard Deviation (SD); Body Mass Index (BMI); Heart Rate (HR); Glutamic Oxalacetic Transaminase (AST); Glutamic Pyruvic Transaminase (ALT); Glycated Hemoglobin (HbA1c).

DISCUSSION

This is one of the first cross-sectional studies to evaluate the clinical and lifestyle parameters of patients diagnosed with dyspepsia at a philanthropic gastroenterology outpatient clinic in Belo Horizonte. In this way, this study contains relevant information to better understand the profile of this population and apply this knowledge to improve care in the line of care.

The results show that women are more likely to be diagnosed with dyspepsia than men. According to Ford et al. (2015), this relationship corroborates data on the global prevalence of functional dyspepsia diagnosis by gender. [14]

As for the patients' nutritional status, overweight was the most frequent classification. Excess weight is a predictor of worsening functional dyspepsia.[15,16,17,18] In this perspective, the descriptive values found in this study help to rectify this hypothesis.

As well as being overweight, previous studies have described an association between the consumption of licit drugs through smoking and alcohol habits and the worsening of dyspepsia.[19,20] The high frequency of alcohol consumption may contribute to this result. Although an investigation into the association between these factors was not carried out according to the medical records evaluated, which does not allow causal inferences to be made. [21,22,23,24]

As for the level of physical activity, the majority (57%) of medical records indicated self-reported sedentary behavior. The physical factors involved in the pathogenesis of dyspepsia are delayed gastric emptying, impaired gastric accommodation, gastric hypersensitivity to distension, duodenal hypersensitivity to acids and lipids, a history of gastrointestinal infections and mucosal inflammation. Physical activity increases the concentration of high-density lipoproteins and reduces the concentration of low-density lipoproteins, distributes adipose tissue, improves cognitive function, improves the response to psychosocial stressors, improves depression, reduces the risk of duodenal ulcers, reduces the risk of colon cancer and helps activate the immune system. Combined with a proper diet,

physical activity helps reduce body weight and thus prevents associated morbidities such as dyspepsia.[25,26]

In terms of triglycerides, cholesterol, AST and ALT, normal levels were observed, in contrast to glycated hemoglobin and fasting glycemia, with values above those expected for age and gender. The literature does not provide sufficient results on the comparison between laboratory tests and the diagnosis of dyspepsia, so more studies on the subject are needed to establish relationships.

This study has some limitations. The convenience sampling of medical records may not allow the information to be generalized. Among the medical records evaluated, it was observed that they were filled out by different professionals, causing possible intra-observer differences. Another issue is the potential for changes in patients' medical data over the collection period. The consultations and the extraction of information from medical records did not occur on the same date, so there is no guarantee the data remained unchanged.

CONCLUSION

The results of this study show that most patients with dyspepsia were overweight adult women who drank alcohol and were sedentary.

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