

ORIGINAL ARTICLE

Endoscopic and Histopathological Characteristics of Polypoid and Non-Polypoid Colorectal Lesions in Patients of a Social Security Hospital of Lambayeque, Peru

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ABSTRACT

Objective: To describe the endoscopic and histopathological characteristics of polypoid and non-polypoid colorectal lesions at the Luis Heysen Inchaustegui hospital, Peru, 2017-2018.

Materials and methods: Descriptive-analytical cross-sectional study. We study epidemiological, endoscopic and histopathological variables. location, Size and shape of the lesions taking into account the Paris classification.

Results: Endoscopically, of a total of 81 colorectal lesions, the majority were non-polypoid (71.6%). Lesions smaller than 10mm represented 90.1% in non-polypoid lesions and 56.5 % in polypoid lesions. Histopathologically, non-adenomatous lesions predominated (53.0%).

Conclusions: The most frequent lesions were non-polypoid, the main location being the rectum; while in polypoid lesions, the transverse colon. Regarding size, lesions smaller than 10mm predominated in both non-polypoid and polypoid lesions. Histopathologically, the most frequent were non-adenomatous lesions (hyperplastic polyps); for its part, the predominant adenoma subtype was tubular.

Keywords: Adenomas; Polyps; Intestinal Polyps; Colon (source: DeCS BIREME).

INTRODUCCIÓN:

Superficial lesions of the digestive tract are those arising from the mucosa, which extend in the mucosa or below it to the submucosa (1). In general, to describe the morphological appearance of these lesions, the Paris classification is used, which includes polypoid and non-polypoid lesions (1). Non-polypoid lesions represent about 25% of all colorectal neoplasms (2). Regarding polypoid lesions, described in most studies as "polyps", it is generally suggested that their prevalence in patients with colonoscopic studies is between 5.3% and 14.5% (3). According to data from the American Society of Colon and Rectal Surgeons, polyps that affect the colon and rectum occur in 15 to 20% of the adult population (4). Histopathologically, there are several classifications (5) (6); within which the hyperplastic polyp has a prevalence that ranges from 30% to 70% in endoscopic examinations and between 5% and 11% in autopsy studies (7). Likewise, colorectal adenomas have a prevalence of 40% in endoscopic series and 25% in autopsy series (7). The characterization of an adenoma is important, since more than 95% of colon adenocarcinomas originate from them (7). Therefore, early identification of these lesions are determining factors for a good prognosis of cure and patient survival (8)

According to the above, a large part of the adult population suffers from colorectal lesions, so the study is important to describe the most frequent characteristics of colorectal lesions in terms of their shape, location, size and histopathology, acquiring particular importance the identification and description of adenomatous lesions, due to their potential risk of malignancy. Likewise, in Peru there are few studies on the subject in question; and in Lambayeque the behavior of these lesions is still unknown, so the present study tries to understand how it affects the population; Similarly.

Therefore, the objective of the present investigation was to describe the endoscopic and

histopathological characteristics of polypoid and non-polypoid colorectal lesions in a private hospital in Chiclayo, Peru.

MATERIALS AND METHODS:

Study design: A descriptive-analytical cross-sectional study was carried out.

Population and sample: Clinical records of 129 polypoid and non-polypoid colorectal lesions, reported in the Gastroenterology service of the Luis Heysen Inchaustegui Hospital during the years 2017 and 2018, were reviewed. The sample was made up of all those colorectal lesions that met the inclusion and exclusion criteria; that is, 81 colorectal lesions. A non-probability sampling was carried out. All polypoid and non-polypoid colorectal lesions with complete colonoscopy and histopathology reports were included. Incomplete colonoscopic and histopathological reports, colorectal lesions without histopathological report, and reports reported as colonic mucosa without atypia were excluded.

PROCEDURES

The information was extracted from a data collection sheet (annex), prepared by the author and reviewed by the gastroenterology expert. A data collection sheet was used for each identified lesion, since the unit of analysis / measurement was colorectal lesions. The following data were extracted from the colonoscopy reports: age and sex of the patients; in addition, location, size and shape of the lesions taking into account the Paris classification (subpediculate polypoid lesions were also considered, which are included in the JSCE classification) (2). Subsequently, the histopathological report of each lesion in the database of the pathology service was reviewed, extracting the data corresponding to the histological type (adenomatous or non-adenomatous) and the degree of dysplasia (low and high degree). The location of the lesions was divided into the following segments:

rectum, rectosigmoid junction, sigmoid colon, descending colon, transverse colon, ascending colon and, additionally, the cecum because reports with this location were found. Two groups were formed according to size: less than 10 mm and greater than or equal to 10 mm. Finally, a database was created in the Excel program (office 2013).

Instrument: It consisted of 3 sections: epidemiological data (3 items), endoscopic (5 items) and histopathological (3 items), which were to mark and fill in; In addition, the "comments" section will be added in order to add data that is not present in the 3 mentioned sections and to mention if the reports are complete or incomplete.

Data analysis: Data analysis was performed with the statistical program STATA 15.1. In the univariate analysis, for the categorical variables, absolute frequencies and percentages were estimated. In the case of age, measures of central tendency (median) and dispersion (standard deviation) were used. Additionally, the Chi square test was used to explore the association between the histopathological type and the size and shape variables, previously evaluating the assumption of expected frequencies. Otherwise, Fisher's exact test was used to explore the association between the histopathological type and the location of the lesions. We worked with a significance level of 5%.

Ethical aspects:

The project with the initial title was approved by the Research Committee and the Institutional Research Ethics Committee of the Lambayeque Healthcare Network "Juan Aita Valle" - EsSalud; Certificate No. 43; NIT: 1298-2018-15729 (Annex N ° 03). The confidentiality of the data was protected using anonymized codes, which was made up of the number of the data collection card followed by the number of the medical record. It is worth mentioning that the application of informed consent was not necessary, since the information was obtained from the existing data from the colonoscopy and histopathology reports, so no contact was maintained with the patients.

RESULTS:

526 colonoscopic reports were reviewed, of which 92 patients whose report had the Paris classification (including subpediculate lesions) were identified, resulting in a total of 129 superficial colorectal lesions; however, only 81 colorectal lesions belonging to 60 patients met the selection criteria. Of the 60 patients, the majority were female (56.7%) and the mean age was 60.73 ± 12.44 years.

Features endoscopic and histopathologic of polypoid lesions and nonpolypoid: For the number of superficial lesions, the mean ($n = 1.35$) and the median ($n = 1$) were calculated, having as minimum and maximum values 1 and 4 respectively (in 44 patients only 1 lesion was described, in 12 patients 2 lesions, 3 lesions in 3 patients and 4 lesions in 1 patient). Taking into account the endoscopic classification of the 81 colorectal lesions, non-polypoid lesions predominated (71.6%); being the most frequent subcategory 0-IIa (96.6%), followed by 0-IIb (3.4%), no 0-IIc lesions were found; the subcategories of polypoid lesions are seen in Graph 01. Other characteristics of interest are detailed in Table 01.

Graph 01: Polypoid lesions according to subcategories at the Luis Heysen Inchishategui Hospital, 2017-2018

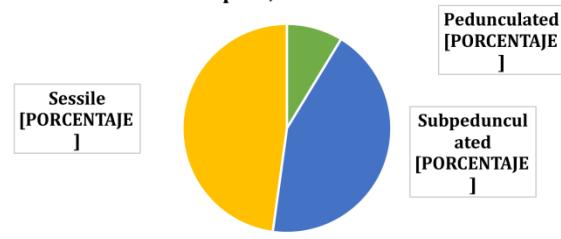
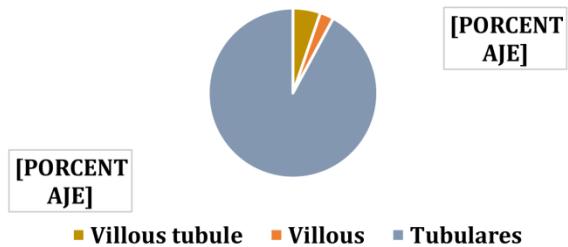


Table 01. Macroscopic and histopathological characteristics of polypoid and non-polypoid lesions at the Luis Heysen Inchishategui hospital, 2017 - 2018

Variables	Polypoid lesions		Nonpolypoid lesions	
	N = 23	%	N = 58	(%)
Location				
Rectum	5	21.74	19	32.76
Rectosigmoid junction	2	8.70	0	0.00
Sigmoid	3	13.04	9	15.52
Falling	2	8.70	11	18.97
Transverse	6	26.09	11	18.97
Upward	3	13.04	7	12.07
Blind	2	8.70	1	1.72
Size (mm)				
<10	13	56.52	54	93.10
≥10	10	43.48	4	6.90
Histopathological type				
Adenomatous	13	56.52	25	43.10
Not adenomatous	10	43.48	33	56.90

Regarding the histopathological findings of the 81 colorectal lesions (polypoid and non-polypoid), 43 lesions were of the non-adenomatous type (53.1%) and 38 lesions were of the adenomatous type (46.9%); however, in polypoid lesions the adenomatous type predominated (56.52%), while in non-polypoid lesions the non-adenomatous type predominated (56.90%). Of the 43 lesions of the non-adenomatous type, all the results were reported as hyperplastic polyps (100%); while in the adenomatous type the tubular subtype predominated, representing 92% (Graph No. 02).

Graph N ° 02: Subtype of adenomatous lesions at the Luis Heysen Inchásticategui Hospital, 2017-2018. [PORCENTAJE]



In the bivariate analysis, Fisher's exact test was applied, in such a way that the histopathological type (adenomatous, non-adenomatous) had a statistically significant association with the endoscopic location ($p = 0.005$). Likewise, by

means of the chi² test, it was determined that there is an association between the histopathological type and the size of the superficial colorectal lesion ($p = 0.043$), but there is no association with the endoscopic form (Table 2).

Table 2. Macroscopic characteristics associated with adenomatous lesions in bivariate analysis at the Luis Heysen Inchishategui hospital, 2017 - 2018

Variables	Adenomatous lesions		p
	Yes (N = 38)	No (N = 43)	
N (%)	N (%)		
Location			0.005*
Rectum	4 (16.67)	20 (83.33)	
Rectosigmoid junction	1 (50.00)	1 (50.00)	
Sigmoid	5 (41.67)	7 (58.33)	
Falling	7 (53.85)	6 (46.15)	
Transverse	11 (64.71)	6 (35.29)	
Upward	8 (80.00)	2 (20.00)	
Blind	2 (66.67)	1 (33.33)	
Endoscopic form			0.275**
0 - I	13 (56.52)	10 (43.48)	
0 - II	25 (43.10)	33 (56.90)	
Size (mm)			0.043**
<10	28 (73.68)	39 (90.70)	
≥10	10 (26.32)	4 (9.30)	

* Obtained by Fisher's exact test

** Obtained by chi²

DISCUSSION:

Endoscopically, the most frequent superficial colorectal lesions were non-polypoid lesions; a finding similar to that reported by Canales et al in Peru (9), which could be due to the fact that both studies had a similar population.

Of the non-polypoid lesions, the predominant subcategory was 0-IIa; followed by 0-IIb, these data agree with the description by Martínez et al in Venezuela (10), but to a lesser extent because the study by Martínez et al (10) included other diagnostic groups (lateral growth tumors, lesions mixed type IIa + IIc). The most frequent location of non-polypoid lesions was the rectum, which differs from the findings of Martínez et al in Venezuela (10), whose most frequent findings were found in the right colon, and as mentioned, the fact would be given by the high incidence of right colon cancer. In non-polypoid lesions, those measuring less than 10mm represented the majority; the study by Bianco et al in Italy (11) also refers to them as the majority, although in a lower percentage, since they excluded lesions smaller than 5mm.

The predominant polypoid lesions were sessile lesions, which agrees with the studies by Prieto et al in Colombia (12), García et al in Cuba (13), Troncoso (14), and Veramendi in Peru (15). However, the main location was the transverse colon, unlike García et al in Cuba (13), whose most frequent findings were in the sigmoid colon, the difference in both studies is that the study by García (13) included more of patients aged 70 and over.

According to the histopathology results, non-adenomatous lesions were the predominant ones, a result that differs from that found in other studies, such as the one carried out by Canales (9), whose most frequent findings were adenomatous lesions, this may be due to the fact that the present study excluded incomplete reports of adenomas, in which the subtype was not detailed. Within the adenomatous lesions, regardless of their morphology, tubular adenomas were the predominant ones (9,10, 15).

Since the lesions were mostly smaller than 10 mm, it is necessary to pay special attention to these lesions in order to detect and treat them early to prevent the genesis of malignant neoplasms, since as indicated by Canales (9), a increase in the rate of colorectal cancers ≤10mm.

The main limitation was the study population, so the results obtained cannot be generalized. Furthermore, in several histopathological reports, the adenoma subtype was not included, which influenced the inclusion criteria and results. Regarding the histopathological reports, there were 5 mild and 2 moderate dysplasias; which to unify concepts and participate in the study had to be included in the group of low-grade dysplasias, since what "previously was classified as mild, moderate, severe dysplasia and carcinoma in situ, today severe dysplasia and carcinoma in situ are grouped into high-grade dysplasia and mild and moderate dysplasia are grouped into low-grade dysplasia". (5) The present study reveals the problem of superficial colorectal lesions in the Luis Heysen Incháustegui hospital, which is novel, since it is the first study in the Lambayeque Region.

It is concluded that endoscopically, the most frequent lesions were non-polypoid, the main location being the rectum. On the other hand, the non-polypoid lesions had the transverse colon as their main location. Likewise, the size smaller than 10mm predominated in both non-polypoid and polypoid lesions. Additionally, histologically, non-neoplastic lesions were more frequent, all being hyperplastic polyps, which predominated in the rectum; It is striking that its predominant endoscopic form was 0-IIa (flat lesion). Of the group of adenomatous lesions, the most frequent subtype was the tubular adenoma, which predominated in the transverse colon and in the same way the form 0-IIa predominated. Through statistical analysis, it was possible to establish that there is an association between the size of the colorectal lesion and the histopathological type (adenomatous and non-adenomatous); Likewise, it was determined that there is no association between the endoscopic form and the histopathological type.

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