



ENDOSCOPIC MANAGEMENT OF SUBEPITHELIAL LESIONS OF THE STOMACH

Andrea Carolina Gómez Molina^{1*}, Manuel Rafael Aldás Erazo²

¹*Estudiante de la carrera de Medicina de la Universidad Católica de Cuenca,
Email: acgomezm68@est.ucacue.edu.ec, Orcid: 0009-0000-0163-2358

²Docente Universidad Católica de Cuenca, Email: manuel.aldas@ucacue.edu.ec,
Orcid: 0000-0003-1229-490X

***Corresponding Author:** - Andrea Carolina Gómez Molina

*Estudiante de la carrera de Medicina de la Universidad Católica de Cuenca, Email:
acgomezm68@est.ucacue.edu.ec, Orcid: 0009-0000-0163-2358

Abstract:

Subepithelial lesions are considered a great concern for doctors, gastroenterologists and endoscopists, since there is a high frequency of diagnosing during the practice of routine endoscopies. Its causes can be due to both intrinsic lesions of the wall of the gastrointestinal tract (benign or malignant) and extrinsic compressions caused by normal or pathological structures. The majority of lesions are of benign origin, however, there is a percentage between 12 to 15% of lesions that could be of malignant origin, so timely diagnosis is of great importance for adequate treatment.

General objective: to describe the different endoscopic techniques for the management of subepithelial lesions of the stomach.

Methodology: literature review. Health databases such as Cochrane, PubMed, Dialnet, Cinahl, Scopus, etc. will be searched. Key words such as "endoscopy", "endosonography", "stomach", "gastrointestinal stromal tumors" will be used in English and Spanish. Boolean operators will be used to improve searches: "AND" and "OR"

Key words: endoscopy, endosonography, stomach, gastrointestinal stromal tumors.

INTRODUCTION:

Subepithelial lesions are frequent, and their causes can be due to both intrinsic lesions of the wall of the gastrointestinal tract (benign or malignant) and extrinsic compressions caused by normal or pathological structures. The presence of one of these lesions usually occurs incidentally and in many cases no relationship is established with the symptoms, something that may raise doubts about the diagnostic study for the early detection of gastric cancer, which is possible due to advances in diagnostic techniques and endoscopic treatment that have changed the paradigm of early gastric cancer treatment. Recognition of subepithelial lesions is incidental in 85% of cases and has now been associated with early gastric cancer detection during screening studies (1,2).

Subepithelial lesions (SELs) can appear in different parts of the gastrointestinal tract and are usually identified through endoscopy or cross-sectional imaging studies. In recent years, there has been a significant evolution after the introduction of endoscopic ultrasound (EUS) with the aim of achieving greater precision in the diagnosis of subepithelial lesions (3).

Considering that subepithelial lesions, in most cases, are detected incidentally, it is necessary to differentiate extrinsic compressions, which, unlike subepithelial lesions, do not originate in the inner part of the wall of the gastrointestinal tract (GIT) and, on the other hand, require determining the risk of the lesion being malignant (4). For the above reasons, it is necessary for gastroenterologists and medical personnel in general to identify these lesions early, which is why it is important to know about different diagnostic studies and, in particular, about the present literature review on the subject.

Methodology:

Study Design

Literature review

Search Strategies

Health databases such as Elsevier, PubMed, Dialnet, Scopus will be searched. Key words such as "subepithelial lesions", "stomach", "endoscopic techniques", "clinical manifestations" will be used in English and Spanish. Boolean operators will be used to improve searches: "AND" and "OR"

Table 1 PICO Strategy

Research Question	What endoscopic techniques are used for the management of subepithelial lesions of the stomach?		Keywords
PICO Strategy	Q: Patient	Patient diagnosed with subepithelial lesions of the stomach.	Subepithelial lesions
	I: Intervention	Use of endoscopic techniques	USE
	C: Comparison	Effectiveness of the use of endoscopic techniques	Endoscopic techniques, subepithelial lesions
	O: Outcomes Results	Proper and rapid diagnosis	Endoscopic techniques, subepithelial lesions

Table 2. Database search strategy.

DATABASE	KEYWORDS	FILTERS
Dialnet/PubMed	Endoscopic techniques, subepithelial lesions, stomach, symptoms	Language: Spanish, English, years 2018-2022
ScienceDirect/Medline	Endoscopic techniques, subepithelial lesions, stomach, symptoms	Language: Spanish, English, years 2018-2022
Scielo	Endoscopic techniques, subepithelial lesions, stomach, symptoms	Language: Spanish, English, years 2018-2022

Eligibility Criteria

Inclusion criteria

- Articles published from 2018 onwards
- Articles with all the complete information
- Articles in Spanish and English
- Articles with free access

Exclusion Criteria

- Duplicate Items
- Articles from sources other than journals indexed in defined databases

Definition:

Subepithelial lesions (SLE) have been defined as those that arise deep in the layers of the walls of the gastrointestinal tract (GI). Due to their periodicity, they are located in the stomach, esophagus and duodenum (9). In general, they are covered by healthy mucosa, however, in some cases inflammation or ulceration of the mucosa may be observed (10).

Studies have confirmed that the incidence of gastric subepithelial tumors (gSET) in routine examinations is approximately between 0.36 and 1.94%, the most common being gastrointestinal

stromal tumors (GIST) that originate in the musculature propria and are considered to be of malignant potential, and surveillance and follow-up are recommended; In addition, positive excision for gSET ≤ 2 cm without the use of high-risk endoscopic ultrasound (EUS) is recommended, considering that they are at very low risk of malignancy and metastasis (11). However, it is considered that small gSETs, mainly medium or high-risk GISTs, should be removed when detected to corroborate the diagnosis and prevent further malignancy, and endoscopic procedures are appropriate for gSETs (12).

Incidence

It is difficult to determine the incidence as many patients remain asymptomatic, which makes it difficult to establish a diagnosis, on the other hand, most of the documented studies are case studies, mostly with 1 or 2 patients. Studies have reported an incidence of gastric subepithelial lesions during upper gastrointestinal endoscopy of 0.36% reported in 1991, without other studies evaluating their incidence having been documented, although a slightly higher incidence is estimated taking into account the development of new endoscopic techniques (13).

Dorelo et al. (14), studied the prevalence, endoscopic characteristics, and diagnostic/therapeutic management of epithelial lesions, detecting 0.7% in patients, of whom 72% were women. The largest location was in the stomach in 74%, with a dimension ranging from 5-50 mm, of which 50% was less than 10 mm. EUS was performed in 11% of the cases studied, all of which were larger than 10mm: 2 ectopic pancreases, a lesion that has a high compatibility with leiomyoma, 2 lesions at the level of the muscularis propria (leiomyoma/GIST) and the presence of extrinsic compression.

In other studies, 11% of subepithelial lesions are reported. Hu et al. (7), reported a pathological diagnosis of leiomyoma (49.9%), GIST (42.3%), schwannoma (2.1%), ectopic pancreas (1.2%), and other tumors or tissues (4.5%)

On the other hand, López-Fuentes et al. (15) underwent EUS in 60.9% of patients, of which 31.4% underwent biopsies. The location of SLE was: 9.75% in the esophagus, 73.1% in the gastric and 17% in the small intestine; with a dimension of 17.5mm. Malignancy was established by EUS criteria in 32%, of which 75 % was confirmed by histopathology.

Physiopathology

Subepithelial lesions (SLE) originate deep in the layers of the wall of the gastrointestinal tract, with localization according to their periodicity in the stomach, esophagus and duodenum. In general, they are covered by healthy mucosa, however, in some cases mucosa with signs of inflammation is observed (16).

Subepithelial lesions are extramural and intramural in origin. The first are compressions that can occur as a result of pathological lesions contiguous with the digestive tract such as: neoplastic processes, abscesses, pancreatic collections, cysts, lymphadenopathy, aneurysms; They can also correspond to nearby anatomical structures such as the spleen, gallbladder, among others (17).

Lesions of intramural origin may originate in one of the histological layers that form the walls of the digestive tract, which have certain ultrasonographic characteristics that can lead to the prediction of their possible histological nature. Some cases have shown that hypoechoic lesions located at the level of the esophagus have a high probability of being related to leiomyomas or leiomyosarcomas in the histopathological study and that lesions that have similar characteristics, but located at the level of the stomach, could be compatible with tumors of the gastrointestinal stroma (18).

GISTs can arise within Cajal cells, which are related to axons that are part of enteric motor neurons, which give rise to peristaltic activity. They are most often located in the gastric system, then in the small intestine, large intestine, and esophagus (19).

Morphologically, GISTs can range from spherical shapes to an ellipsoid and elongated shape, with a stable consistency, originating essentially from the muscularis propria and less frequently from the muscularis mucosa, sometimes even from the submucosa (19).

They may present with a benign phenotype, i.e. painless, without symptoms, or a metastatic phenotype. The main symptoms are identified as abdominal pain, bloating, feeling of fullness, gastrointestinal bleeding, tiredness and anemia. Sometimes its presentation could occur as an acute

abdomen since a tumor rupture or gastrointestinal obstruction can occur. The most common spread is to the liver and abdominal cavity, and sometimes when cases have progressed, metastatic spread may be directed to the lungs (20).

Clinical manifestations

Among the main clinical manifestations, the following have been established (21):

- Anorexia
- Weight loss
- Abdominal pain
- Imprecise discomfort, usually at the level of the mesogastrium.
- Early satiety
- Acidity
- Nausea
- Emesis
- Hematemesis
- Ascites
- Manes
- Anaemia

Chao et al. (22), in a descriptive-longitudinal study, found that the most frequent symptom was dyspepsia in 49% of cases, followed by abdominal pain in 27%, dysphagia in 11.5% and digestive bleeding in 11.5%. According to ultrasonographic findings, most of the lesions were hypoechoic, 57.7 %, corresponding to the fourth layer (muscularis propria), in 30.7 % the lesions were hypoechoic of the third layer (submucosa) and 11.6 % anechoic lesions in the form of cysts.

Another study found that the majority of patients (53.3%) were symptomatic, with abdominal discomfort (55.6%) being the most frequent symptom (20).

Types of lesions and endoscopic management of them

The types of injuries that are distinguished are (23):

According to its location: in the identification of the subepithelial lesion, it must be differentiated in the first instance whether the lesion is intramural or extramural.

Extrinsic compressions. This injury can be caused by common structures such as the xiphoid bone (fundus), left hepatic lobe, accessory spleen/spleen (fundus, upper body), gallbladder (antrum), or pathologic abdominal masses (tumors, pancreatic pseudocysts, enlarged lymph nodes), and vessel aneurysms.

Intrinsic compressions. The origin of these lesions can be found in any of the histological layers of the digestive system. In the case of intrinsic compressions, endoscopic ultrasonography plays an important role, since it has been shown that its ultrasonographic characteristics could cooperate in the prediction of its possible histological nature, for example, in some cases hypoechoic lesions located at the level of the stomach could be related to a gastrointestinal stromal tumor with a chance ranging from 69% to 95% (24).

Endoscopic ultrasonography (EUS), which has a sensitivity of up to 92%, can identify intrinsic and extrinsic compressions (25). When differentiating between intramural and extramural lesions, the combination of frequencies of 7.5 MHz and frequencies above 12 MHz has been used. In the case of 7.5 MHz, a deeper view can be achieved and the correlation between the gastric wall and the lesion can be better assessed, while with 12 MHz the image obtained has more details of the interface between the gastric serous wall and the extramural lesion (26).

Gastrointestinal stromal tumors

Gastrointestinal stromal tumors (GIST) form a rare tumor grouping among neoplasms, the incidence of such tumors is 11 to 20 cases in one million individuals; However, tumors of the digestive tract are the most common. These occur in people between the ages of 40 and 70, however, they can appear at

any age (27). Gastrointestinal stromal tumors are clinically asymptomatic, symptoms only occur when they reach a considerable size and, in most cases, are diagnosed accidentally (28).

Endoscopically, they can appear as a hypoechoic and homogeneous lesion, although they can also present with a heterogeneous appearance with anechoic areas or with calcifications. Most lesions measure more than 30 millimeters and their morphological appearance is irregular (29).

Histologically, 70% of GISTs are spindle cells, followed by 20% of epithelioid cells and the remaining 10% of mixed cells (30). In order to estimate the malignant potential of gastrointestinal stromal tumors, the size, the site where it is located, the histopathological study and the mitotic count must be taken into account

Leiomyomas

Leiomyomas are benign mesenchymal tumors that originate from the muscularis propria, however, in some cases they can be located in the muscular layer of the mucosa. These can affect both men and women, and their incidence increases after the age of 60 (18). Such tumors are usually asymptomatic or sometimes there may be symptoms of lower gastrointestinal bleeding. Leiomyomas do not have specific endoscopic features. By means of endoscopic ultrasound, these are frequently found at the level of the muscularis propria and infrequently in the muscular mucosa, these are hypoechoic, homogeneous and with flat borders.

Ectopic pancreas

The ectopic pancreas is a rare mass that occurs after the presence of pancreatic tissue outside its usual anatomical location, without anatomical vascular continuity of the pancreas. Almost all cases are diagnosed incidentally, with an incidence of 25%. The most common location is in the stomach, followed by the duodenum and ileum. They are usually asymptomatic, however, there may be non-specific symptoms such as abdominal pain and bloating (31). Endoscopically it can be visualized as a rounded, firm lesion, covered by healthy mucosa, almost all the lesions have a central umbilication in their extension. In the event that the aforementioned characteristics are met, endoscopic ultrasound is generally not recommended, however, it will be indicated in the case of an altered morphology, since its differential diagnoses include GIST and carcinoid tumors, which have a high potential for malignancy (31,32).

Carcinoid tumor

They are submucosal lesions that form from cells of endocrine origin and have a high capacity for degeneration. In most cases, the diagnosis is made incidentally, it has a very low frequency, presenting 5 cases in 100 thousand inhabitants annually. They are commonly asymptomatic, but sometimes produce symptoms such as bleeding, abdominal pain, and endocrine symptoms secondary to the secretion of active substances. The most common location is the small intestine, followed by the rectum and stomach (33).

Endoscopically, they are visualized as small, round, sessile or polypoid lesions with endoscopic-looking mucosa that simulates normality, which sometimes appears ulcerated. As for its size, it can vary from a few millimeters to a centimeter. In the case of gastric appearance, their presentation is usually multiple, while if they appear in other parts of the digestive system, their appearance is solitary. They can originate in the mucosa or in the muscular mucosa and can sometimes invade the third layer (34).

Other less common lesions than those mentioned above are schwannomas (tumors arising from the nerve sheath), duplication cysts, inflammatory fibroid lesions, lymphoma, lymphangioma, glomus tumor, and submucosal metastases.

There are also epithelial lesions that mimic SEL. Early gastric cancer is rare and can mimic subepithelial lesions with intact epithelium. Studies by Imamura et al. and Kato et al. (35) have confirmed the presence of gastric cancer as subepithelial masses.

Diagnosis

By endoscopy

It is the most effective test in the diagnosis of many diseases of the digestive tract and is the first test used when making a diagnostic impression of subepithelial lesion of the digestive tract, an impression that may come from the clinic in the presence of anemia, abdominal pain or in other cases in which the impression is established by complementary examinations, mainly radiological (36).

By endoscopic ultrasound

Endoscopic ultrasound or endoscopic ultrasound (EUS) is a technique that combines the functions of ultrasound and digestive endoscopy in a single instrument. Using a high-frequency ultrasound transducer, which results in high-resolution imaging, allows the wall of the esophagus, stomach, small intestine and adjacent structures to be properly observed, thus obtaining more information through local image visualization (22).

Endoscopic ultrasound or endoscopic ultrasound (EUS) is a valuable endoscopic technique that is currently considered to be the preferred procedure for the evaluation and treatment of subepithelial lesions in the gastrointestinal tract. It is also useful for analyzing and treating both solid and cystic lesions in the pancreas, and plays an important role in the staging of tumors in the esophagus, stomach, liver, pancreas, gallbladder, bile ducts, and rectum. Beyond its diagnostic function, endoscopic ultrasound is an interventional technique with a growing number of therapeutic applications, such as fine needle aspiration biopsy (FNA), drainage of fluid collections in or around the pancreas, and neurolysis of the celiac plexus, among others. Therefore, it has become an integral part of various medical protocols for the evaluation and treatment of various diseases of the gastrointestinal tract. (22).

After the histological study, endoscopic ultrasound contributes the most to the diagnosis of subepithelial lesions.

In the study of subepithelial lesions, the most frequently occurring entities are (36):

- a) Gastrointestinal stromal tumor (GIST). They constitute a heterogeneous group of tumours of different origins, cell differentiation and prognosis.
- b) Leiomyomas and leiomyosarcomas. Leiomyomas are benign mesenchymal tumors of the gastrointestinal tract with muscle differentiation. The most accurate method for diagnosing leiomyomas is endoscopic ultrasound, as well as for differentiating these lesions from others, including leiomyosarcoma. These lesions are most common in the esophagus, small intestine, and rectum, and rarely occur in the stomach. Leiomyosarcomas occur very rarely in the gastrointestinal tract and if they do occur, it is mainly in the small intestine.
- c) Schwannomas. These are the rarer lesions that occur in the intestinal tract

Contrast-enhanced ultrasound endoscopy

In recent years, the use of EUS with contrast has been implemented, as it not only helps in the diagnosis of subepithelial lesions, but is also capable of contributing to the differential diagnosis with other pathologies. Through the use of contrast, the microvascularization and perfusion of the lesions can be visualized in detail. By means of EUS with contrast, it is possible to differentiate between gastrointestinal stromal tumors and benign subepithelial lesions, since the presence of hyperenhancement guides the diagnosis of GIST with a high percentage of sensitivity and specificity, while the appearance of hyperenhancement is associated with leiomyomas. Findings associated with a high degree of malignancy include irregular vessels, heterogeneous perfusion pattern, and the presence of unenhanced spots (24).

Histological diagnosis

Sometimes, for hypoechoic lesions that originate in the second and fourth ultrasound layers (muscularis mucosa and muscularis propria, correspondingly), endoscopic and endosonographic characteristics are not sufficient to make an accurate diagnosis or to determine their biological behavior. (37). Because of the malignant potential of some lesions, particularly gastrointestinal

stromal tumors, histological examination is considered mandatory. According to the guidelines, the use of endoscopic ultrasound is indicated for hypoechoic subepithelial lesions larger than two centimeters, since below this limit the risk of malignancy is very low.

Fine needle aspiration (FNA) guided by endoscopic ultrasonography (EUS) is useful for obtaining cytological material from pancreatic tumors, lymphadenopathy, and other lesions (38).

Endoscopic ultrasound-guided fine-needle biopsy

It has a very high diagnostic accuracy in the detection of gastrointestinal stromal tumors, it is much more efficient compared to fine needle aspiration, since it has greater accuracy for tissue acquisition and a high diagnostic accuracy for all gastric subepithelial lesions.

Ultrasound-Endoscopically Guided Fine Needle Aspiration

Although the standard of care is the use of endoscopic ultrasound-guided fine-needle biopsy, endoscopic-guided fine-needle aspiration is currently an option in case of EUS-BNF unavailability. Studies carried out by Akahoshi et al. conclude that the larger the size of the mass, the more likely it is that an adequate sample will be obtained, since in tumors smaller than 2 cm a diagnosis could be made in 71% of cases, while in tumors between 2 and 4 cm in 86% of cases and in tumors larger than 4 cm in 100% of cases (39).

In the study by Dorelo et al. (14), 54 subepithelial lesions were identified in a total of 7,983 patients, representing 0.7% of cases. Of these patients, 72% were women and the main reason for evaluation was the presence of dyspepsia in 26% of cases. The most common location of these lesions was in the stomach, accounting for 74% of cases. On average, these lesions were 16 mm in size, ranging from 5 mm to 50 mm, and half of them were smaller than 10 mm. In seven cases, mucosal ulcerations were observed, and four of these lesions were found in the gastric body. 86% of patients were referred due to gastrointestinal bleeding or anemia. Standard biopsies were performed in 48% of cases and biopsies on biopsies in 11%, although the latter did not yield useful diagnostic results. In 11% of cases, endoscopic ultrasound (EUS) was performed on lesions larger than 10 mm. EUS findings included two cases of ectopic pancreas, one lesion suggestive of leiomyoma, two lesions in the muscularis propria (leiomyoma/GIST), and extrinsic compression. All subepithelial lesions were managed conservatively.

Endoscopic management for the treatment of subepithelial lesions.

In the past, subepithelial lesions were treated by surgical resection, however, subepithelial tumors with an inward growth tendency are difficult to remove surgically, as the lumen of the gastrointestinal tract cannot be visualized. In addition, surgical resection can result in gastrointestinal deformation, impaired function due to excessive tissue removal, and other complications. It is for all these reasons that nowadays by means of endoscopy devices a better control of dissection has been given.

Endoscopic mucosal resection

Small subepithelial lesions (1 to 2 cm) can be resected by endoscopic mucosal resection, using a standard loop, where the loop is placed under the subepithelial lesion and resected with the help of an electrocautery. Before resection, it is necessary to confirm whether the tumor can be displaced without the need for subsequent repair. This method is especially used to resect tumors that are in the muscular mucosa or submucosa. In addition, endoscopic submucosal resection with a ligation device is a method in which the tumor is aspirated into the ligation device in order to mobilize the lesion. It is important to mention that in lesions larger than 1 cm, resection is very complex, since the diameter of the ligation device is 1 cm (40).

Endoscopic submucosal dissection

Recently, the application of endoscopic submucosal dissection (DES) for the treatment of subepithelial lesions has extended beyond mucosal lesions of the gastrointestinal tract.

Young et al. mention that, in one study, the removal of LES from the submucosal layer has a complete success rate of 75% in patients treated with DES. None of the patients in this study had serious complications, including perforation or massive bleeding. In another study, researchers demonstrated that DES was an effective and safe method of eliminating gastric SLE; The overall resection rate was 81.1% and none of the patients had recurrence of the disease.

Endoscopic ultrasound, thanks to being a hybrid technique, having endoscopy equipment incorporated distally with a high-resolution ultrasound transducer, allows endoscopic and ultrasound images to be obtained to discriminate extradigestive lesions related to intra-abdominal organs in the gastrointestinal tract (41).

The technique emerged in 1980, when the first prototype was developed in Japan by Olympus Co Ltd., in search of finding a diagnostic technique for the study of small pancreatic carcinoma. The development and progress in the technique, as well as the knowledge we have of it, have grown rapidly to the present day, where transducers with better resolution are used for diagnosis through cytology or fine needle biopsy collections, as well as therapeutically for tumor ablation and collection drainage (41).

A gastrointestinal surgeon or gastroenterologist who has hands-on training in centers with adequate certification for teaching along with annual experience in performing the procedure and ERCP, according to the American Gastroenterological Association, has the necessary faculties to perform the procedure. Comments (42)tags.

However, the American, European and British societies of gastroenterology agree that, in order to apply this technique within the framework of safety and efficacy, between 225 and 250 procedures involving punctures should be performed under the supervision of an expert on at least 50 to 75 occasions (42).

Endosonography has been considered the most accurate technique for the evaluation of subepithelial lesions since it is able to accurately define the histological layers and, therefore, the place where the lesion originates. It is considered superior to other imaging techniques such as magnetic resonance imaging or computed tomography to characterize lesions smaller than 2cm, that is, it can accurately differentiate between extrinsic compression of the gastrointestinal tract and intramural growth (42).

The technique makes it possible to estimate the size of the lesion and identify the 5 main echolayers in gastrointestinal wall lesions and associated lymphadenopathies. Trindade et al. (43) found in their study that EUS had overall pressure of 64.2%, in contrast to CT with 50.9%. The accuracy of EUS versus CT for GIST was 83.9% vs 74.2%, leiomyomas 37.5% vs 0.0%, and ectopic pancreas 57.1% vs 14.3%. Most of the diagnostic inaccuracies with the use of EUS referred to hypoechogenic lesions from the 4th ultralayer, and the most frequent misdiagnoses occurred in the confusion of GISTs with leiomyomas. EUS currently also allows the characterization of subepithelial lesions by evaluating their depth to define endoscopic resections.

Endosonography or endoscopic ultrasound (EUS) is the technique of choice, taking into account that the accuracy of EUS in differentiating extraluminal compression from a subepithelial tumor exceeds 95%, making it more effective than other imaging techniques such as conventional ultrasound or CT (43).

Prognosis of Subepithelial Lesions

The prognosis of subepithelial lesions is associated with their etiology, taking into account that most are benign and asymptomatic, hence the prognosis depends on the behavior of the lesion. In the case of GISTs, the biological behavior varies, prolonged follow-up shows that almost all GISTs have a malignant behavior, including those of 2 cm or less with non-aggressive characteristics, hence the tendency to stratify the lesions according to the level of recurrence and metastasis. The characteristics of the lesions detected on CT or EUS imaging tests may not only indicate a diagnosis of GIST, but also associate those characteristics with the risk of recurrence (40).

Discussion

Subepithelial lesions located in the stomach are uncommon and usually the vast majority of patients who cope with them tend to remain asymptomatic, which makes early diagnosis difficult. Subepithelial tumors are usually incidental findings that are made during endoscopic diagnosis for other indications, most of these are usually asymptomatic and benign; However, in up to 15% of cases there may be some malignant potential, which is why making an accurate diagnosis is of great importance (15).

According to Ludwig et al (44) it mentions that the therapy should be clarified during the initial endoscopy, since the visual evaluation of the mucosa, the size of the find, the location and the endoscopic aspects of the mucosa are important for the subsequent procedure.

Several authors mention that the most frequent imaging studies, such as CT or CMR, have a low sensitivity and specificity, compared to endoscopic ultrasonography, which, in addition to enabling diagnosis by imaging and biopsies, is capable of contributing to the staging of the lesion (14). Similarly, according to Gasmi, et al (45), the endoscopic aspect is minimally specific, so it should be explored later by means of endoscopic ultrasound, allowing an adequate diagnosis to be guided.

In a study carried out between 2011-2018, according to the analyses carried out after the endoscopic diagnosis of subepithelial lesions of the stomach, the data show that, of the study sample, 72% were women, with an average age of 64 years. Of the lesions diagnosed at the gastric level, about half of them were found in the antrum, followed by the body, cardia and fundus(14).

Currently, new diagnostic modalities have been shown, such as EUS without biopsy, the use of EUS with contrast, which is used as a differential diagnosis with other pathologies such as GIST, since it has a high level of specificity in terms of differentiating between them; In addition, it can allow a detailed view of the microvascularization and perfusion of lesions (39)

In a retrospective study conducted by Luna et al (15). The aim of the study was to determine the usefulness of taking biopsies by fine needle aspiration guided by endoscopic ultrasound, in most of the patients submitted to this study they had a non-specific diagnosis, since only a limited group of cells can be obtained by means of guided FNA, to which it is extremely difficult to perform immunohistochemical tests in order to obtain a specific diagnosis.

As for endoscopic submucosal resection and dissection, which is a technique that allows a larger group of cells to be obtained, and also the ability to make a definitive diagnosis in a large percentage of cases, however, this technique should only be performed on lesions that are in the submucosa or deep mucosa, since it has a high rate of adverse effects such as: perforation, pneumoperitoneum, hemorrhage (46).

Results

Subepithelial lesions are a pathology that mainly affects women, the average age of the condition is between the fourth decade of life. The greatest localization of this pathology occurs in the stomach, followed by the esophagus and duodenum.

The main symptoms consist of dyspepsia, abdominal pain, dysphagia, and gastrointestinal bleeding. It should be taken into account that the finding of subepithelial lesions usually occurs incidentally in 85% of cases and in many cases there is no relationship with the symptoms presented by the patient. SELs can appear in different parts of the digestive system and in most cases it is identified through endoscopy, however, in the last decade endoscopic ultrasound has been used, which is more accurate in terms of diagnosis, since it is able to accurately pinpoint the histological layers and, hence, the location where the tumor originates.

Conclusion

The vast majority of these lesions are of benign etiology, however, there is a percentage that ranges between 12% to 15% in relation to malignancy, these subepithelial tumors are infrequently diagnosed in an ideal way, since being a rare disease no screening programs have been established, which negatively affects the treatment and prognosis. significantly impairing patients' quality of life.

Digestive endoscopy, in addition to providing the initial diagnosis, can provide information of great importance such as the appearance of the mucosa, consistency, size and signs that could guide us in terms of the etiological diagnosis.

As for the use of EUS, it is essential for the evaluation of subepithelial tumors, since it allows the characterization of LSE, however, it can only generate an irrefutable diagnosis in a limited number of lesions, such as in the case of varicose veins and lipomas since they have specific ultrasound characteristics.

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