British Journal of Healthcare and Medical Research - Vol. 12, No. 04
Publication Date: August 03, 2025
DOI:10.14738/bjhr.1204.19188.
Hernández, J. L. G., Cortés, I. Y. P., Cabello, J. de J. U., Barrón, G. M., Suárez, I. A. L., Segura, C. A. S., & Sánchez, M. A. G. (2025). Gastrointestinal Hemorrhage: Is it a Cause of Malpractice? Decades of Colonoscopy. *British Journal of Healthcare and Medical Research*, Vol - 12(04). 185-200.

Gastrointestinal Hemorrhage: Is it a Cause of Malpractice? Decades of Colonoscopy

José Luis García Hernández
Specialist in Surgery. Attached to the Department of Surgery General Hospital Iztapalapa "Dr. Juan Ramón de la Fuente" of the Ministry of Health of Mexico City. Graduated from the National Autonomous University of Mexico. Mexico City. Country Mexico

Imelda Yasmín Palma Cortés
Specialist in Surgery. Attached to the Department of Surgery General Hospital "Dr. Rubén Leñero" of the Ministry of Health of Mexico City. Graduated from the National Autonomous University of Mexico. Mexico City. Country Mexico

José de Jesús Urbina Cabello
Surgery Specialist, attached to the Department of Surgery of the "Dr. Rubén Leñero" General Hospital Secretariat of Health of Mexico City, graduated from the National Autonomous University of Mexico, Mexico City, Mexico

Gema Méndez Barrón
Surgery Specialist, attached to the Department of Surgery of the "Dr. Rubén Leñero" General Hospital Secretariat of Health of Mexico City, graduated from the National Autonomous University of Mexico, Mexico City, Mexico

Ivonne Alondra León Suárez
Specialist in Surgery. Attached to the Department of Surgery General Hospital "Dr. Rubén Leñero" of the Ministry of Health of Mexico City. Graduated from the National Autonomous University of Mexico. Mexico City. Country Mexico

Carlos Andrés Salas Segura
Specialist in Surgery. Attached to the Department of Surgery General Hospital "Dr. Rubén Leñero" of the Ministry of Health of Mexico City. Graduated from the National Autonomous University of Mexico. Mexico City. Country Mexico

Morelos Adolfo García Sánchez*
*Specialist in Surgery and with a Subspecialty in Colon and Rectal Surgery attached to the Surgery Department of the General Hospital Ministry of Health of Mexico City. "Dr. Rubén Leñero". Graduated from the National Autonomous University of Mexico, Mexico City. Country Mexico

* Correspondence: morelosadolfo@hotmail.com

ABSTRACT

Introduction: Gastrointestinal bleeding is currently a common and underestimated entity, since its diagnostic/therapeutic importance has been left aside and due to erring in its true etiology, it is therefore belligerent. Objective: To describe the experience of the results obtained in the Colon and Rectal Surgery service of the colonoscopies performed in the various hospitals. Method: A study with a multicenter, retrospective, longitudinal, observational and descriptive design was conducted in patients with gastrointestinal bleeding who underwent colonoscopy. Results: A total of 24,185 colonoscopy reports were reviewed, including 3,971 patients who underwent colonoscopy due to the indication of lower gastrointestinal bleeding, of which 1,946 were women (49%) and 2,025 men (51%). The first cause of lower gastrointestinal bleeding was polyposis disease, the second was colon and rectal cancer, and thirdly, diverticular disease. Discussion: The etiology of upper, lower or middle intestinal gastrointestinal bleeding is very varied, so it is very difficult to diagnose, with its symptoms and signs that are usually nonspecific and may resemble those of other diseases, which increases the probability of misdiagnosis. Conclusion: endoscopy plays an indispensable role for the diagnosis, treatment, and follow-up of gastrointestinal bleeding, as well as initial and long-term medical management is decisive in terms of a comprehensive clinical evaluation and an adequate tropicalized response with the resources and supplies that allow the patient to be helped.

Keywords: Endoscopy, Gastrointestinal bleeding, Bleeding, Colonoscopy, A etiology, Hemostasis.

INTRODUCTION

In patients, gastrointestinal bleeding is currently a common and underestimated entity, since its diagnostic/therapeutic importance has been left aside and due to erring in its true etiology, it is therefore belligerent.

The etymological root of hemorrhage comes from the Greek "haima", which means blood, and from "rhegnynai", which is to break, in short "blood to come out". Hemorrhage is defined as bleeding from the physically, biochemically or diseasedly damaged circulatory system, inside or outside the body; it can be internal, non-externalized or externalized, or by the capillary, venous or arterial anatomical site. [1] There is then the variant that when the hemorrhage is from the digestive tract, this is its origin, becoming a frequent clinical problem in the emergency services of hospitals worldwide. [2] Gastrointestinal bleeding is arbitrarily divided anatomically into upper and lower by the ligament of Treitz, in other references the midgut is added 5 to 10% of all gastrointestinal tract hemorrhages [3] or up to the adverb of unknown origin; [4] The incidence of upper gastrointestinal bleeding worldwide ranges from 37 to 172 cases per 100,000 population per year and mortality ranges from 5 to 14%. [5] Another presentation that should be considered is massive gastrointestinal bleeding, which is relevant for its high mortality, and the need for transfusion, angio-embolization, endoscopic procedures or surgery, etc., should be considered to treat these patients. [6]

It is important to take into account that there are several differential diagnoses of gastrointestinal bleeding and that it is a constant, continuous and modifiable clinical state, in hours or days. Hence the intention of this document. Upper gastrointestinal bleeding is the most

frequent site of presentation, with an incidence of up to 80% and where gastric pathology is the main etiology. [7] Peptic ulcer disease accounts for 40% to 50% of cases, most of which are secondary to duodenal ulcers (30%). And they are thought to be encouraged by nonsteroidal anti-inflammatory drugs, Helicobacter pylori, and/or stress itself. [8] It mainly affects the elderly population, with a predominance of males. It can be associated with high morbidity and mortality depending on the severity and profile of the patient, and they have been classified into two categories: those that are not related to portal hypertension and those that do. [9] In Mexico, there are no reliable statistics on the incidence and/or prevalence of this clinical entity, which evidences the x-ray of real and tropicalized conditions, which is why whenever the patient requires it due to his hemodynamic situation, resuscitation measures should be prioritized over any other point. Information that is useful should be obtained, both to establish a first etiological approximation and to identify factors of recognized prognostic value. [10] Upper gastrointestinal bleeding is considered by many as a medical-surgical emergency that sustains a high mortality despite the therapeutic advances of recent years; where the initial resuscitation and stabilization of the patient in relation to hypovolemic shock is essential, the use of antibiotics is controversial, since it will be applied depending on the causal pathology. [11] Gastrointestinal bleeding is a common cause of hospitalization, accounting for > 900,000 emergency department visits and > 500,000 hospitalizations in the U.S. Annually, care for people with severe gastrointestinal bleeding should encompass pre-admission, hospitalization, and post-discharge care. [12]

The gastrointestinal diagnosis of bleeding is in most cases a challenge, with a high error factor not considering that it is a changing sign, not a diagnosis and even less a disease; a non-invasive and patient-centered approach must be offered for the observation of the digestive tract, in an efficient way: immediate, complete and forceful. [13] Since 2000, it has been achieved with the help of detecting and monitoring disorders such as unexplained gastrointestinal bleeding, with the use of capsule endoscopy, which has revolutionized gastrointestinal diagnosis of bleeding. [14] On the other hand, excessive use of intravenous proton pump inhibitors has been documented in the treatment of upper gastrointestinal bleeding, or in actual practice as prevention, custom, or inference. This leads to false negatives in a transcendental way, at the time the pan endoscopy is performed, three to four days later. [15]

OBJECTIVE

To describe the experience of the results obtained in the Colon and Rectal Surgery service, of the colonoscopies performed in the various hospitals, deductively and critically analyzing the data obtained.

METHOD

This is a study with a multicenter, retrospective, longitudinal, observational and descriptive design, where the Colonoscopies performed on patients with the diagnosis of gastrointestinal bleeding in the various hospitals are investigated, based on the records and records of all patients in the colon and rectal surgery services, in a third level of health care in three hospitals in Mexico City:

1. Hospital of the High Specialty Medical Unit, National Medical Center for Infectious Diseases. "Dr. Daniel Méndez Hernández" of the Mexican Institute of Social Security. Mexico City. Country: Mexico. 3rd Level.

URL: http://dx.doi.org/10.14738/bjhr.1204.19188.

2. Specialty Hospital of Mexico City "Dr. Belisario Domínguez" of the Ministry of Health. Mexico City. Country: Mexico. 3rd Level.
3. Metropolitan Hospital of Mexico City. Grupo Ángeles. Mexico City. Country: Mexico. 3rd Level.

In a study period that includes the month of January 2005 to January 2025.

The variables to be evaluated were: age, sex, clinical diagnosis or indication of the procedure, duration of the procedure, complications, endoscopic diagnoses, cause of suspension of the procedure, and the most frequently reached colonic segment. An analysis of the study and presentation of the results was carried out using descriptive methods by biostatistical procedures.

RESULTS

A total of 24,185 colonoscopy reports were reviewed, including 3,971 patients who underwent colonoscopy for the indication of lower gastrointestinal bleeding, of which 1,946 were women (49%) and the remaining 2,025 men (51%). With an age range it was from 18 to 97 years old with an average of 42 years.

The mean time to perform colonoscopy in complete studies to reach the cecum was 24 minutes, with a range of 9 to 107 minutes. The most frequently affected anatomical segment of the colon was the cecum, in 84% of which 2,827 studies were counted, and of these, 77% were cannulated the terminal ileum. It occupies the second place in terms of indication of a new diagnostic colonoscopy due to the entity of lower gastrointestinal bleeding. The endoscopic diagnoses are tabulated by the colonoscopies performed and it is specified that most are normal, their result reaches up to 76% with a nominal report of 3,057, which of the total studies carried out in two decades, this indication only represents 12.64%. with 914 patients representing 24%, but in the adjusted reality of the total number of studies where an endoscopic diagnosis or over-suspicion was found, which justifies the presence of blood in the digestive tract in a pathological way, they only represent 3.77% of a total of 24,185 studies. (See table 1)

Polyps in the colon and rectum is the first cause of lower gastrointestinal bleeding with an incidence of 31% and an adjusted percentage of the total studies carried out of 1.17%, the second cause that is documented is colon and rectal cancer being 22%, which adjusted of the total studies is 0.83% and in third place inflammatory bowel disease is detected in 19%. in the modality of chronic and nonspecific ulcerative colitis, which in reality or adjusted is 0.71%. The information is completed in Table 1.

Table 1: Indication of Colonoscopy in the Causal Diagnostic Search for Lower Gastrointestinal Bleeding in Three Tertiary Hospitals.

Endoscopy diagnosis	Number/%
Angiodysplasia due to lower gastrointestinal bleeding	2/0.21
Colon and/or rectal cancer	201/22
Diverticular disease (diverticulitis)	128/14
Polyps in the rectum or colon	283/31
Normal study	3,057/76
Inflammatory bowel disease type UC	172/19

Inflammatory bowel disease crohn's type	3 /0.32
Post-radiation proctitis	17/2
Other	108 /11.47
Total	914/100

Graph 1: Indication of Colonoscopy in the Causal Diagnostic Search for Lower Gastrointestinal Bleeding in Three Tertiary Hospitals.

Patients with 914 colonoscopies analyzed the clinical presentation, breaking down what was reported, as few published medical literatures has done. For this reason, Dr. Morelos Adolfo García Sánchez has created a comprehensive clinical classification of gastrointestinal bleeding (GBCCC) that provides a guide to achieve an accurate diagnostic/therapeutic suspicion.

The sign of bleeding in and out of the bowel movement, approximate amount, combination with fecal matter, color in its blood tonalities, clots or not, added systemic and/or proctological symptoms.

The color of the blood when it comes out of the anus is classified:

1. Bright red: Rectal bleeding
2. Vinous red: Hematochezia
3. Very dark red or black: Mane

The color of the blood when it comes out of the mouth is classified:

1. Bright red: Hematemesis
2. Dark red, black: "Coffee wells"

The amount of blood is classified:

1. Light to light bleeding: Spotted to less than 50 milliliters: Rectal bleeding
2. Moderate bleeding: 51 to 200 milliliters: Hematochezia
3. Severe bleeding: More than 201 milliliters: Melena/Rectal Bleeding

URL: http://dx.doi.org/10.14738/bjhr.1204.19188.

4. Massive bleeding: Continuous incoercible bleeding: Melena/False hematochezia/Rectal bleeding

Bleeding is classified with the degree of combination of stool and clots or not:

1. Rectal bleeding: Without defecation: Separated from fecal matter: No clots.
2. Hematochezia: Partially combined with fecal matter. Clots.
3. Melena: Total combination or complete fusion with fecal matter. No clots.

Systemic symptoms/signs: Asthenia. Adinamia. Tachycardia. Hypertension or hypotension. Pallor of integuments. Dehydration. Fainting. Syncope. Slow capillary filling.

Local symptoms/signs: Specific and localized abdominal pain (Burning/Colic). Heartburn. Gastric fullness. Weight loss. Palpable tumor or visceromegaly. Diarrhoea. Push. Tenesmus. Localized anal (oppressive/burning) pain. Diarrhea/constipation.

The exception is when there is cough and there is scant consecutive bleeding of respiratory origin is of pulmonary etiology called hemoptysis and when it is a major bleeding sometimes violent, of respiratory etiology it is called Vomica.

GBCCC was applied to patients who had lower gastrointestinal bleeding corroborated by endoscopy in this study and the results were tabulated in Table 3.

Comprehensive Clinical Classification Of Gastrointestinal Hemorrhage

Location	Type of bleeding	Color/appearance	Medical term
Anus	Fresh Bleeding	Bright Red	Rectal bleeding 
	Dark Bleeding	Wine-Red	Hematochezia 
Mouth		Very Dark Red or Black	Melena 
	Fresh Bleeding	Bright Red	Hematemesis 
	Digested Bleeding	Very Dark Red or Black	Coffee-ground emesis 

Medical term	Relation	Clots	Type
Rectal bleeding	Separate from stool		Fresh Bleeding
Hematochezia	Dark Partial mixture with stool		Moderate bleeding
Melena	Complete fusion with stool (black)		Digested Bleeding

Bleeding	Volume	Medical Term
Mild	Spotting (<50 ml)	Rectal bleeding
Moderate	51–200 ml	Hematochezia
Severe	>201 ml	Melena / Rectal bleeding
Massive	Uncontrollable continuous bleeding	Melena / False hematochezia

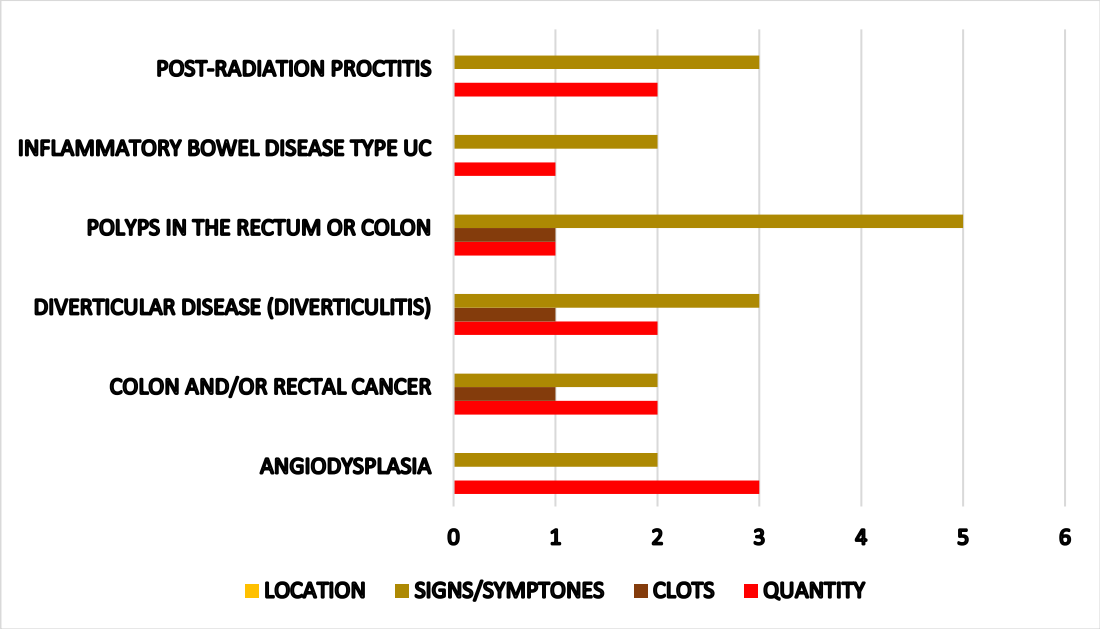
Symptoms	Characteristics
Systemic	• Asthenia • Adynamia • Tachycardia • Dehydration • Presyncope
Local	• Abdominal pain (burning pain/cramping pain) • Heartburn • Weight loss • Diarrhoea

Table 3: Application of CCGB in patients with lower gastrointestinal bleeding corroborated by colonoscopy

Endoscopic diagnosis	Color	Quantity	Combination with fecal matter	Clots	Signs/ symptoms
Angiodysplasia	Rectal bleeding	Massive	Without defecating	No	None
Colon and/or rectal cancer	Rectal bleeding/hematochezia	Mild/moderate	Partially	Yes	Yes/systemic
Diverticular disease (diverticulitis)	Rectal bleeding	Moderate	No	Yes	Yes/local
Polyps in the rectum or colon	Rectal bleeding/hematochezia	Lightweight	Partially	Yes	None
Inflammatory bowel disease type UC	Rectal bleeding/hematochezia	Lightweight	No/partially	No	Yes/local/ systemic
Post-radiation proctitis	Rectal bleeding	Moderate	No	No	Yes/local

Analyzing table and graph 3, it is observed that no melena ever occurred in any patient with bleeding from the lower gastrointestinal tract confirmed by colonoscopy. Only angiodysplasia of the distal colon or midgut is the only detectable cause of massive bleeding, but its incidence is anecdotal. Most of the colon and rectal pathology in terms of bleeding in 99.9% is scarce or mild and less frequently moderate, hence its chronicity and the little importance that the patient gives to the presence of this sign (bleeding). In addition, the clinical picture is not disabling or life-threatening (a real emergency). Another observation that is sometimes confused is the combination of red blood cells with fecal matter. Where sigmoid and rectal pathology cannot be combined and the few causes of bleeding from the right colon only partially do so. Here then it is evident that the GBCCC, previously confirmed with the endoscopic diagnosis; this classification is useful and returns to follow the classic conduct of a clinical diagnosis, made by a trained physician who can only confirm with the corresponding and competent study.

URL: http://dx.doi.org/10.14738/bjhr.1204.19188.



Graphic 3: Application of CCGB in patients with lower gastrointestinal bleeding corroborated by colonoscopy

The result of an active hemorrhage of the lower intestine involving the colon and rectum must be specified or considered in a timely manner; since performing colonoscopy with blood and clots inside the colon hinders visibility, darkens the field of vision and limits its diagnostic specificity, as well as completing even the segment of the colon that is the cecum at least, with poor or incomplete preparation. It is here where the expertise and judgment of the doctor operating the colonoscope makes the difference, which is already difficult to study due to its anatomy and variants, coupled with bleeding, therefore the complexity is too much potentiated in these previously described conditions.

Normal colonoscopy studies have been considered due to the fact that the colon or rectum are not the real reason for the disease. And where active bleeding or mane is anatomically derived from the upper digestive tract; since of 3,097 studies, 94% had active bleeding/melena that evidently had upper digestive origin, in a total of 2,911 patients, however the indication was due to the suspicion of being of the colon or rectum, due to the fact that the red blood cell came out of the anus, being melena, hematochezia and even rectal bleeding.

The segments achieved in patients who underwent colonoscopy were collected in 83% of the cecum, 2.8% of the ascending colon, sigmoid and rectum in 14.2% of a total of 3,971 cases.

The objective of a colonoscopy is to complete the study by reaching the cecum and, if possible, to cannulate the ileocecal valve by evaluating the terminal ileal bowel. This will depend on the skill of the operator, "carrilero" or assistant, the preparation of the colon, the anesthesia or not, and the number of bleeding/clots. Of the 24,184 colonoscopies that were not completed in 1,102 cases or 5.56%, they were tabulated by suspension for the following reasons:

1. Intense pain of the patient, since most of these institutional or public hospital studies are done without anesthesia support:61%
2. Poor preparation of the colon: 34%

3. The colonoscope decomposed: 5%
4. Obstructive rectal or colonic pathology. That it is not considered a real motive.

These figures, which reach 66%, only show poor management by senior management in the public sector.

Only 3 complications were reported: two perforations and one post-polypectomy bleeding, out of 24,184 studies representing 0.0124% where they underwent surgery resolving without sequelae, with primary closure in the absence of another resource and a new electrocoagulation. There was no reported mortality.

DISCUSIÓN

The etiology of an upper gastrointestinal bleeding is very varied, this can be from a duodenal cholecystic fistula that is very difficult to diagnose, with its symptoms that are usually non-specific and can resemble those of other chronic biliary diseases, which increases the probability of a misdiagnosis. [16] Gastrointestinal emergencies are serious complications in preterm infants such as gastrointestinal bleeding, often resulting in fatal outcomes due to involuntary delays in accurate diagnosis and initiation of timely treatment. These delays are due to the non-specificity of the clinical picture, as well as the deficiencies of the existing methods in clinical practice. [17]

On the other hand, in high bleeding of varicose origin due to portal hypertension, early transjugular intrahepatic portosystemic shunt (TIPS) is a therapeutic option for acute varicose bleeding, with low risk of rebleeding, were significantly lower 10.8% vs 50.8%, however, the long-term results of early TIPS compared to standard treatment but are not associated with a survival benefit. [18] Portal hypertension is a clinical syndrome caused by increased pressure in the portal vein and its branches, with cirrhosis being the most common cause, and where 2D-SWE ultrasound elastography is a new technique that reflects the severity of portal hypertension, or the options of computed tomography and magnetic resonance imaging provide detailed anatomical information of the liver and spleen, and can be used to assess hemodynamic changes in the portal venous system that explains the cause of gastrointestinal bleeding. [19]

Endoscopy is a crucial tool in the management of acute varicose bleeding. However, the optimal timing for its implementation remains controversial, if endoscopy is performed within 6 hours it could be associated with increased mortality. In addition, the urgent and early form did not significantly affect other outcomes in patients. Therefore, the timing of endoscopy would be more appropriate based on each patient's condition within 24 hours. [20] Upper gastrointestinal bleeding is associated with poor outcomes in patients with cirrhosis. Of these, 294 (88%) survived, and 39 (12%) died with Childs-Pugh C cirrhosis (67% vs. 32%, $p<0.001$), added to hypotension or hepatic encephalopathy and finally hepatocellular carcinoma. [21]

Another etiology is upper gastrointestinal tract neoplasms diagnosed with a large, early-stage adenocarcinoma of Barrett's esophagus, with an extension, after significant bleeding in the first mucosal incision at the distal margin, the initial therapeutic plan of the tunnel creation method was modified, and a complete circumferential incision was made followed by a submucosal dissection assisted by the saline immersion technique, and The double-clip traction method,

URL: http://dx.doi.org/10.14738/bjhr.1204.19188.

the lesion was resected en bloc and no adverse events occurred. [22] Dieulafoy's lesion is another rare but potentially fatal cause of no varicose upper gastrointestinal bleeding, accounting for 2-5% of all cases of acute upper gastrointestinal bleeding; treatment with thermal coagulation, mechanical clipping, and injection therapy are commonly employed and have demonstrated a high hemostasis success rate and 30% failure rate in rebleeding.[23] Aerosols have been an important adjunct to clips, which can be extremely useful in difficult clinical scenarios where clips might not be effective. We recommend initial use in patients at high risk of rebleeding, such as patients with dual antiplatelet therapy, those requiring early restart of anticoagulation, with chronic kidney disease, and in extensive ulcerative bleeding (> 1.5 cm). [24] With regard to polyps of the digestive tract, they are pathologies so frequent, diverse, topographically non-exclusive that they mean in any portion of the intestinal mucosa and are in themselves a very frequent cause of gastrointestinal bleeding per se, mostly undervalued or underestimated. [25] Or failing that, even polyposis syndromes of the upper, middle, and lower gastrointestinal tract, most of which have the initial clinical picture of gastrointestinal bleeding itself. [26, 27]

Bouveret's syndrome is an extremely rare cause of upper gastrointestinal bleeding, this does not exempt it as a differential diagnosis and after images or radiological techniques, endoscopy is the diagnostic/therapeutic option. [28] Another because that should not be left out is Meckel's diverticulum, which is a mostly asymptomatic congenital anomaly. However, they can be used as hemorrhage and gastrointestinal obstruction in young children, where imaging revealed a dilated and inflamed segment of small intestine, which resolved with surgical management. [29]

A rare pathology that causes gastrointestinal bleeding is intestinal angiodysplasia since they occur in patients with aggressive, continuous or recurrent bleeding, they are diagnosed and endoscopic therapy is initiated. In certain patients with recurrent bleeding, preventive therapies may also be attempted, such as the use of octreotide which results in reducing the number of gastrointestinal bleeding events, the need for gastrointestinal endoscopic therapies, and the frequency of red blood cell transfusions. [30]

Gastrointestinal bleeding of obscure origin represents a diagnostic challenge for the medical area, although advances with video capsule endoscopy and enteroscopy have increased the correct diagnostic detection, the cause of a mid-bowel bleeding that is rare, one cause is tumors. [31] Multisegmented stenosis, where there are limitations to using surgical or endoscopic treatment alone. The objective was to treat multisegmented strictures and intestinal bleeding in Crohn's disease by a combination of surgery and/or endoscopic therapy, strategically evaluating efficacy and safety with intraoperative enteroscopy. [32] In addition, the prevalence of lesions in the small intestine in patients with cirrhosis of the liver is clinically relevant to their endoscopic findings and is not yet clear, but the pathology called hypertensive enteropathy presents with an initial bleeding of up to 66%, so they should be evaluated by capsule endoscopy. [33] Although several types of small bowel lesions have been described as bleeding etiologies (including inflammatory bowel disease, polyps, and malignancy, among others), vascular lesions of the small intestine are the most common, angiodysplasia, also referred to as angioectasia or vascular ectasias, refers to abnormally dilated, tortuous, thin-walled blood vessels in the mucosa and submucosa of the gastrointestinal tract. There are also varicose veins, Dieulafoy lesions, telenagiectasias or Osler-Weber-Rendu syndrome. [34]

Diagnosis is with video capsule endoscopy, enteroscopy (with tube, spiral, motorized spiral or balloon), angiography with computed tomography, scintigraphy of red blood cells labeled with technetium-99 and finally enterorrhaphy by computed tomography. [35] As far as treatment is concerned, the application of argon plasma, electrocoagulation and hemostatic clips. Endoscopic sclerotherapy may be used for varicose veins. Endoscopic epinephrine injection may be used as adjunct therapy to one of the hemostasis methods described below. Finally, in the event of failure of endoscopic therapies, hemostatic aerosols, powders or gels with variable clinical efficacy rates can be considered. [36, 37] However, in intestinal bleeding in a hemodynamically unstable patient, it is recommended to proceed directly to angiography for selective embolization before considering endoscopic approaches, with a success rate of up to 95% in hemostasis. [38]

In terms of medical management, the new options are somatostatin analogues, such as octreotide, which have shown value in treating gastrointestinal bleeding through multiple mechanisms. [39] Thalidomide is another medical therapy that has been shown to decrease the expression of proangiogenic factors and has been studied in patients with gastrointestinal bleeding of the small intestine. [40, 41] Intravenous bevacizumab, a humanized monoclonal antibody against vascular endothelial growth factor A, has been shown to be effective in reducing blood loss in refractory gastrointestinal bleeding of the small intestine. [42, 43]

It has been detected that bleeding from the digestive tract under the most common cause in Japan is colonic diverticular disease due to population aging, however, between 70% and 90% of patients achieve spontaneous hemostasis, there is a recurrence of new bleeding in up to 35%. Detecting the source of bleeding remains a challenge, as accurate identification is essential for successful hemostasis. [41] Gastrointestinal stromal tumors are the most common mesenchymal tumors affecting the digestive tract. Symptoms vary depending on the location and size of the tumor, those related to the tumor mass effect, others that present with anemia and gastrointestinal bleeding. Its diagnosis is with computed tomography and its treatment is surgical. [44]

Contrary rectal bleeding is an adverse event associated with radiotherapy for prostate cancer, the likelihood of rectal bleeding could have increased due to increased rectal exposure to radiation as radiotherapy was continued, evoking mucosal ischemia, no scarring and neo forming vessels. [45] Severe cases of colonic diverticular bleeding may require trans arterial embolization or surgery, which are life-threatening in older patients with multiple comorbidities: however, endoscopic hemostasis is preferable to single-balloon-assisted endoscopy and endoscopic band ligation. [46] A total of 8,956 patients with lower gastrointestinal bleeding were analyzed in the study, categorizing them into four guideline groups. The results included rebleeding at 30 days, which ranged from 3.7% to 70%, with a decrease in mortality at 30 days, so management with blood transfusion, therapeutic intervention and serious bleeding was not dismissed. [47]

There is relevance, novelty and impact in clinical practice: glucagon-like peptide-1 receptor agonists and endoscopy, advances in Artificial Intelligence in endoscopy, ergonomics in endoscopy, peroral endoscopic myotomy, bariatric and metabolic endoscopy, endoscopic colon resection, gastric intestinal metaplasia and endoscopy, inflammatory bowel disease and endoscopy, risk stratification of gastrointestinal bleeding and endoscopic therapies, and finally

URL: http://dx.doi.org/10.14738/bjhr.1204.19188.

therapeutic endoscopic ultrasound. [48] Although the question is, do these resources actually exist in countries like Mexico in a standardized way?

In recent advances, artificial intelligence has been integrated into capsular endoscopy, which is transforming gastrointestinal diagnosis by improving lesion detection and optimizing reading efficiency; which significantly reduce reading times and demonstrate a high detection capacity, depending on the algorithm and device used. However, a considerable number of lesions remain undetected, which prevents full confidence in these tools. [49] On the other hand, it is a tool that contributed to more accurate diagnoses and greater diagnostic efficiency, it requires a lot of time and effort, so it is crucial to develop deep learning methods that facilitate image analysis [50]

OBSERVACIONES DE LOS AUTORES

- Gastrointestinal bleeding is not a diagnosis, it is only an irrefutable sign of another unrecognized, as-yet-undiagnosed disease.
- The most frequent etiology of gastrointestinal bleeding is of high origin with an incidence of up to 80%, that of the middle intestine is 10%, that of the colon and rectum of 10%; It is decisive that 90% of colon and rectal bleeding is of anal origin and the remaining 10% is from the colon and rectum, in conclusion this reduces that colon and rectal bleeding is only 2% in real terms. And always the inexperienced medical personnel erroneously translate that when blood comes out of the anus the origin is low and of colonic origin.
- All patients with "lower gastrointestinal bleeding" should have their anus examined and therefore "evacuation bleeding" should be visualized as much as possible, for a more objective and real evaluation. However, the doctor does not usually perform a physical exam of this area for unknown reasons.
- The "melena" is a product of the combination of hydrochloric acid of gastric content with hemoglobin of the blood, there is no other organ in the rest of the digestive tract that has this acid, so it is concluded that the etiology of bleeding is always of high origin.
- For only 80 milliliters of blood on a single occasion, you can have mane of hair for up to five days in the bowel movements and not have active bleeding, the remaining four days.
- Having had hair at the beginning and then rectal bleeding has the meaning or translates into massive bleeding, which is not enough when combined with stomach acid and as the blood is irritative to the intestinal mucosa increases the speed of peristalsis causing diarrhea and rectal bleeding.
- The term "coffee wells", something colloquial in itself, is the same effect that occurs in "mane", but it is not an old, old or scarce bleeding, or even inactive considered by some doctors; but this concept is totally wrong, since it is an active, continuous and even massive bleeding. This is explained by two characteristics: a) The force of gravity that is downwards. b) Propulsive gastric and intestinal peristalsis, which is one-way and directed towards the colon.
- Gastrointestinal bleeding is an entity that is always in continuous motion. A common example is the patient who presents hematemesis and "coffee wells" upon admission to the emergency room and the upper endoscopy is performed in 72 hours, and they do not find active bleeding already with pharmacological treatment and then begins a fateful protocol, a waste of resources and supplies in the search for "active bleeding"

three days later. performing a colonoscopy with residual bleeding and the presence of diverticula in the sigmoid colon that are not the real cause of bleeding and even performing sigmoidectomy surgery on the patient, but the problem continues because the bleeding was from the stomach. And in case there are no diverticula, the search will be brutal, with more studies of greater cost and complexity, due to the erroneous suspicion of bleeding from the middle intestine.

- Upper gastrointestinal bleeding evokes an exponential consumption of proteins by the mucosa of the small intestine (blood is a high-protein tissue), when blood count and blood chemistry are evaluated with a decrease in hemoglobin and an increase in urea with the disparity of a creatinine at normal levels (normal ratio 20:1) Bleeding of high etiology is forceful. (Since in the colon and rectum, this absorption function is not carried out)
- Gastrointestinal bleeding is irritating to the mucosa of the intestine, since if it is continuous or massive, it causes an increase in peristalsis due to saturation in malabsorption, evoking secretory diarrhea and misconception with a diagnosis of colitis/proctitis is common.
- Severe/massive gastrointestinal bleeding is always of high etiology and is the common clinical reason for hypovolemic shock.
- Lower gastrointestinal bleeding of the colon and rectum is mostly up to 99% and therefore chronic.
- Angiodysplasias in the reported expertise, in terms of etiology such as small bowel hemorrhage, are anecdotal and bleeding is massive.

CONCLUSIONS

Providing a comprehensive clinical classification of gastrointestinal bleeding that determines a guideline to achieve an accurate diagnostic/therapeutic suspicion allows an accurate approach to the patient, increasing or improving their prognosis or even their cure, without wasting resources or increasing the risks to the patient for doing so.

Endoscopy plays an indispensable role for the diagnosis, treatment, and follow-up of gastrointestinal bleeding, as well as initial and long-term medical management is decisive in terms of a comprehensive clinical evaluation and an adequate tropicalized response with the resources and supplies that allow the patient to be helped.

To date, malpractice in patients with gastrointestinal bleeding is very evident, despite this advanced technological era, policies of zero discrimination, abundant classifications, clinical practice guidelines. international, national and institutional health regulations.

The use of true technologies such as the fusion of software/hardware with capsule endoscopy should be taken advantage of, finalizing an accurate, optimal, non-invasive and immediate diagnosis and at a low cost, in the hope that it will occur in the not-too-distant future.

Conflict of Interest

The authors stated that they had no potential conflicts of interest regarding the research, authorship, and/or publication of this article.

URL: http://dx.doi.org/10.14738/bjhr.1204.19188.

References

1. Salas-Segura C.A., Hernández-Medina, M. S., López-Sixtos, J. R., Arcos-Ruiz, C., & García-Sánchez, M. A. Bleeding in Surgery. British Journal of Healthcare and Medical Research. 2025; 12(04):12-30.
2. Crespo-Vintimilla E. A., Reyes-Flores C.R., Cordero-Cordero, G. D. R. Hemorragia digestiva. Tesla Revista Científica. 2022; 9789(8788). https://doi.org/10.55204/trc.v9789i8788.59
3. Giraudo F., Garbi M.L. Conceptos actuales y abordaje de la hemorragia digestivo del intestino medio. Acta Gastroenterología Latinoamericana. 2024;54(1):31-39.
4. Halim A., Ahmad Z., Ian M. G. Obscure-overt gastrointestinal bleeding: a review. POLISH Archives of Internal Medicine. 2022;132(5):1-5.
5. Martínez S. G., Figueroa N.P., Toro P.J., y cols. Conducta actual frente la hemorragia digestiva alta: Desde el diagnóstico al tratamiento. Revista de cirugía. 2021;73(6):728-743.
6. Capre-Pereira J., Salcedo A., Holguín J. G., y cols. Hemorragia Digestiva Masiva: Redescubriendo Un titán Quirúrgico Del Siglo XX En Un Hospital De Referencia Del Suroccidente Colombiano. Rev Colomb Cir. 2025;40, 544-554.
7. Quirós-Pérez J., Herdoíza-Morales C.A., Segnini-Miranda J.A. Hemorragia digestiva alta: orientación diagnóstica y conducta actual sobre las estrategias terapéuticas, revisión bibliográfica. Ciencia y salud UNIMED. 2024;8(4):41-49.
8. Jáquez-Quintana Joel O. Hemorragia de tubo digestivo alto. Endoscopia. 2021; 33(Suppl 1): 6-8.
9. W. EL Hajj, S. Nahon. Hemorragia digestiva alta, EMC - Tratado de Medicina. 2022; 26, (4):1-9.
10. Acevedo-Cabrera J.J. Experiencia actual en hemorragia digestiva alta en el Hospital Regional "General Ignacio Zaragoza" del ISSSTE. Endoscopia. 2020; 32(Suppl 2): 322-335.
11. Gavilanes-Prócel R. hemorragia digestiva alta en la sala de emergencia: Artículo de Revisión. Ciencia Ecuador. 2023; 5(23):39/62.
12. Hung K.W. Forging a Plan for Gastrointestinal Bleeding Management: Importance of Iron Deficiency Evaluation. Dig Dis Sci. 2025. doi: 10.1007/s10620-025-09153-1.
13. Su C.C., Chou C.K., Mukundan A., et al. Capsule Endoscopy: Current Trends, Technological Advancements, and Future Perspectives in Gastrointestinal Diagnostics. Bioengineering (Basel). 2025; 12(6):613.
14. Choi M.-G. Enfermedad del Intestino Delgado: Una Guía Completa para el Diagnóstico y el Tratamiento. Springer; Berlín/Heidelberg, Alemania: 2022. Historia de la endoscopia capsular; págs. 57-59.
15. Sutton M.M., Gregoski M.J., Rockey D.C. Overuse of Intravenous Proton-Pump Inhibitors in the Treatment of Low-Risk Upper Gastrointestinal Bleeding. J Clin Gastroenterol. 2025., doi: 10.1097/MCG.0000000000002211.
16. Zhao Z., Fan Z., Zhang T. Cholecystoduodenal fistula presenting with refractory upper gastrointestinal bleeding: retrospective analysis: a case report. J Med Case Rep. 2025; 8;19(1):325.
17. Mao Y., Yang Y., Xiong T. Gastrointestinal emergencies and monitoring in preterm infants: a review. Ann Med. 2025; 57(1):2525397. doi: 10.1080/07853890.2025.2525397.
18. Tang X., Liang J.B., Wang C., et al. Long-term outcomes of early transjugular intrahepatic portosystemic shunts in patients with acute variceal bleeding and cirrhosis. World J Hepatol. 2025 Jun 27;17(6):105578.
19. Wang Q.C., Jiao J., Zhang C.Q. Application of artificial intelligence in portal hypertension and esophagogastric varices. World J Gastroenterol. 2025; 31(24):108508.
20. Luo S., Wu K., Zhou X. Timing of endoscopy in patients with acute variceal bleeding in cirrhosis: an updated systematic review and meta-analysis. BMC Gastroenterol. 2025; 25(1):488.
21. Bou Daher H., Gregoski M., Rockey D. EXPRESS: Risk scoring systems to predict in-hospital mortality in patients with cirrhosis admitted with acute upper gastrointestinal bleeding. J Investig Med. 2025:10815589251357622.

22. Bonura G.F., Veiser T., Dertmann T., et al. Saline immersion endoscopic submucosal dissection for management of early Barrett's esophagus adenocarcinoma and large esophageal varices. VideoGIE. 2025; 10(7):345-348.

23. Sonthalia N, Puri R, Sethi S. Role of clips, devices and sprays in endoscopic hemostasis: An update (with videos). Indian J Gastroenterol. 2025, doi: 10.1007/s12664-025-01815-2.

24. Qiu J., Xia Y., Ouyang Q., et al. Forrest-type IIb increases the risk of rebleeding after endoscopic treatment in patients with Dieulafoy's lesion of the upper gastrointestinal tract. Ann Med. 2025; 57(1):2478645.

25. Choi C.Y., Youn S.U., Kim J.M., et al. Outcomes of Endoscopic Papillectomy After an Insulated Plastic Pancreatic Stent Placement: A Retrospective Cohort Study. J Gastroenterol Hepatol. 2025; 40(7):1703-1710.

26. Lupio-García B.R., García-Sánchez M.A., De la Fuente-González M., et al. Pólipos intestinales. Un enigma diagnóstico-terapéutico. Revista Ocronos. 2023; 6: 128.32023.

27. Morelos Adolfo García Sánchez., et al. "Colonoscopy in Mexico, 18 Years of Experience". EC Gastroenterology and Digestive System. 2021;8.2: 68-77.

28. von Felden J., Schulze Zur Wiesch J., Ghadban T., et al. Endoscopic findings of Bouveret syndrome. Z Gastroenterol. 2025; 63(6):593-595.

29. Elifranji M., Ahmed M.E.A., Heffernan S., et al. Erosive Meckel's diverticulum causing concurrent intraluminal and intraperitoneal hemorrhage: first case report in infancy and review of literature. Clin J Gastroenterol. 2025; 18(3):459-462.

30. Ibrahim A., Allam J., Rockey D.C. Octreotide therapy in patients with a left ventricular assist device and bleeding gastrointestinal angiodysplasias. Am. J Med Sci. 2025; 370(1):41-46.

31. Mahmoud F., Ghaith J., Raza J., Anglade P. Intestinal Lymphangioma Presenting With Small Bowel Bleeding. ACG Case Rep J. 2025; 12(7):e01743.

32. Peng B., Liu Z., Wang B., et al. Surgery combined endoscopic stricturotomy for deep small bowel strictures from Crohn' disease: a prospective, single-center cohort study of a novel approach. Surg Endosc. 2025; 39(7):4292-4299.

33. Jackson S.B., Villano N.P., Benhammou J.N., et al. Gastrointestinal Manifestations of Hereditary Hemorrhagic Telangiectasia (HHT): A Systematic Review of the Literature. Dig Dis Sci. 2017; 62(10):2623-2630.

34. Sandhu S., Gross J., Barkin J.A. Small Bowel Bleeding Due to Vascular Lesions: Pathogenesis and Management. Curr Gastroenterol Rep. 2025; 27(1):37

35. ASGE technology committee; Parsi M.A., Schulman A.R., et al. Devices for endoscopic hemostasis of nonvariceal GI bleeding (with videos). VideoGIE. 2019; 4(7):285-299.

36. Seyferth E., Dai R., Ronald J., et al. Safety Profile of Particle Embolization for Treatment of Acute Lower Gastrointestinal Bleeding. J Vasc Interv Radiol. 2022; 33(3):286-294.

37. Goltstein L.C.M.J., Grooteman K.V., Bernts L.H.P., et al. Standard of Care Versus Octreotide in Angiodysplasia-Related Bleeding (the OCEAN Study): A Multicenter Randomized Controlled Trial. Gastroenterology. 2024 Apr;166(4):690-703.

38. Xi Z., Jie W., Long Z., Shasha S. A review of thalidomide and digestive system related diseases. Front Oncol. 2025; 15:1543757, doi: 10.3389/fonc.2025.1543757.

39. Chen H., Wu S., Tang M., et al. Thalidomide for Recurrent Bleeding Due to Small-Intestinal Angiodysplasia. N Engl J Med. 2023; 389(18):1649-1659.

40. Iyer V.N., Apala D.R., Pannu B.S., et al. Intravenous Bevacizumab for Refractory Hereditary Hemorrhagic Telangiectasia-Related Epistaxis and Gastrointestinal Bleeding. Mayo Clin Proc. 2018; 93(2):155-166.

41. Albitar H.A.H., Almodallal Y., Papadakis K.A, et al. Intravenous Bevacizumab Reduces Transfusion Requirements and Endoscopic Interventions in Patients with Gastric Antral Vascular Ectasia and Small Bowel Angioectasia. Gastroenterology. 2020; 158(4):1162-1163.

URL: http://dx.doi.org/10.14738/bjhr.1204.19188.

42. Matsubara Y., Tsuboi A., Shigenobu S., et al. Clinical Significance of Small-Bowel Mucosal Changes in Liver Cirrhosis Patients with Suspected Small-Bowel Bleeding: A Capsule Endoscopy Study. J Gastroenterol Hepatol. 2025; 40(7):1736-1744.

43. Ichita C., Kishino T., Aoki T., et al. Updated evidence on epidemiology, diagnosis, and treatment for colonic diverticular bleeding. DEN Open. 2025; 6(1): e70122.

44. Aregawi A.B., Fenta B.D., Worku M.A., Geremew T.T. Gastrointestinal stromal tumors with atypical features and presentations: A case series. Int J Surg Case Rep. 2025; 133:111569.

45. Inoue K., Shinohara M., Saka T., et al Evaluation of the changes in hydrogel spacer volume in patients treated with proton therapy for prostate cancer. BMC Urol. 2025; 25(1):160.

46. Kishino T., Sawa T., Tsuchihashi T. Successful hemostasis of colonic diverticular bleeding using single-balloon-assisted endoscopy and endoscopic band ligation in a patient with difficult total colonoscopy. Endoscopy. 2025; 57(S 01):E56-E57.

47. Kinjo K, Aoki T, Kobayashi K, Yamauchi A, Yamada A, Omori J, Ikeya T, Aoyama T, Tominaga N, Sato Y, Kishino T, Ishii N, Sawada T, Murata M, Takao A, Mizukami K, Fujimori S, Uotani T, Fujita M, Sato H, Suzuki S, Narasaka T, Hayasaka J, Funabiki T, Kinjo Y, Mizuki A, Kiyotoki S, Mikami T, Gushima R, Fujii H, Fuyuno Y, Hikichi T, Toya Y, Narimatsu K, Manabe N, Nagaike K, Kinjo T, Sumida Y, Funakoshi S, Kobayashi K, Matsuhashi T, Komaki Y, Watanabe K, Hisabe T, Yao K, Kaise M, Nagata N. Validation of British Society of Gastroenterology guidelines for acute lower GI bleeding from 8956 cases in Japan. Gastrointest Endosc. 2025 Jun;101(6):1131-1144.e10.

48. Martinez M., Bartel M.J., Chua T., et al. The 2024 top 10 list of endoscopy topics in medical publishing: an annual review by the American Society for Gastrointestinal Endoscopy Editorial Board. Gastrointest Endosc. 2025; 102(1):2-13.

49. Giordano A., Romero-Mascarell C-, González-Suárez B., Guarner-Argente C. Integration of Artificial Intelligence-Enhanced Capsule Endoscopy in Clinical Practice: A Review of Market-Available Tools for Clinical Practice. Dig Dis Sci. 2025, doi: 10.1007/s10620-025-09099-4.

50. Huang Y.H., Lin Q., Jin X.Y., et al. Classification of pediatric video capsule endoscopy images for small bowel abnormalities using deep learning models. World J Gastroenterol. 2025; 31(21):107601.