




THERAPEUTIC MANAGEMENT OF ACUTE MESENTERIC ISCHEMIA

MANEJO TERAPÊUTICO DA ISQUEMIA MESENTÉRICA AGUDA

MANEJO TERAPÊUTICO DE LA ISQUEMIA MESENTÉRICA AGUDA

 <https://doi.org/10.56238/isevmjv5n2-014>

Receipt of originals: 02/21/2026

Acceptance for publication: 03/21/2026

Gabriel Evangelista dos Santos¹, Ana Beatriz Pires Moreira², João Victor Ribeiro Tajra³, Lucas Perillo Campos⁴, Thawnany Eliandra da Silva Santos⁵, Pedro Stefani Mainardi⁶, Louise Lasta Klatt⁷, João Villar Souza Parisi Dias⁸, Kaiton José de Oliveira⁹, Victor Lasta Klatt¹⁰, Isabel Aline Nascimento Pessoa¹¹, Gabriel de Albuquerque Mello¹², Matheus Duarte Gonçalves¹³

ABSTRACT

Introduction: Acute mesenteric ischemia (AMI) is a vascular emergency that occurs when there is a sudden interruption of blood flow to the visceral organs. Because it presents symptoms similar to other common abdominal diseases, it is often overlooked in the early stages.

Objective: To gather and systematize the most recent evidence on the diagnosis and treatment of AMI, focusing on strategies to improve patient outcomes.

Methodology: A narrative literature review was conducted using the PubMed database, including articles published in the last five years, available in full text in Portuguese or English.

Results and Discussion: Computed tomography angiography has become the gold standard for the diagnosis of AMI, as it allows precise visualization of vascular obstructions and intestinal wall changes. The therapeutic approach depends on the cause of ischemia. In arterial occlusions, revascularization is prioritized, either through surgery or endovascular techniques. In mesenteric venous thrombosis, the initial treatment is clinical, with anticoagulation. In arterial occlusion, the main priority is restoring adequate blood flow. In non-occlusive ischemia, the focus is on correcting low blood flow states and using vasodilators. In cases with suspected intestinal necrosis, laparotomy is essential to assess bowel viability.

¹ Graduated in Physiotherapy. Universidade Estadual Paulista (UNESP).

² Medical student. Universidade do Grande Rio (UNIGRANRIO).

³ Medical student. Centro Universitário Euro-Americano (UNIEURO).

⁴ Medical student. Universidade Federal de Ouro Preto (UFOP).

⁵ Graduated in Nursing. Universidade Paulista (UNIP).

⁶ Medical student. Universidade de Passo Fundo (UPF).

⁷ Medical student. Universidade Católica de Pelotas (UCPEL).

⁸ Medical student. Centro Universitário de Várzea Grande (UNIVAG).

⁹ Medical student. Universidade Nove de Julho (UNINOVE).

¹⁰ Doctor Medical. Universidade Católica de Pelotas (UCPEL).

¹¹ Medical student. Universidade Nilton Lins (UNL).

¹² Medical student. Universidade do Estado do Amazonas (UEA).

¹³ Medical student. Faculdade Evangélica Mackenzie do Paraná (FEMPAR).



Conclusion: Early diagnosis, combined with imaging methods such as computed tomography angiography, is essential for the rapid definition of therapeutic management. Thus, timely initiation of appropriate treatment is crucial to reduce morbidity and mortality and improve patient prognosis.

Keywords: Acute Mesenteric Ischemia (AMI). Computed Tomography Angiography (CTA). Therapeutic Management.

RESUMO

Introdução: A isquemia mesentérica aguda (IMA) é uma emergência vascular que ocorre quando há interrupção súbita do fluxo sanguíneo para os órgãos viscerais. Por apresentar sintomas parecidos com os de outras doenças abdominais comuns, acaba sendo frequentemente negligenciada no início do quadro.

Objetivo: Reunir e sistematizar as evidências mais atuais sobre o diagnóstico e o tratamento da IMA, com foco em estratégias para melhorar a evolução dos pacientes. **Metodologia:** Foi realizada uma revisão narrativa da literatura por meio da base PubMed, incluindo artigos publicados nos últimos cinco anos, disponíveis na íntegra em português ou inglês.

Resultados e Discussão: A angiotomografia computadorizada se firmou como exame padrão-ouro para o diagnóstico da IMA, já que permite visualizar obstruções vasculares e alterações na parede intestinal com precisão. A abordagem terapêutica depende da causa da isquemia. Em oclusões arteriais: prioriza-se a revascularização, por cirurgia ou técnicas endovasculares. Trombose venosa mesentérica: o tratamento inicial é clínico, com anticoagulação. Oclusão arterial: A principal prioridade é a recuperação do fluxo sanguíneo adequado. Isquemia não oclusiva: foca-se na correção do quadro de baixo fluxo sanguíneo e no uso de vasodilatadores. Nos casos com suspeita de necrose intestinal, a laparotomia é indispensável para avaliar a viabilidade do intestino.

Conclusão: O diagnóstico precoce, aliado ao uso de métodos de imagem como a angiotomografia, é essencial para a definição rápida da conduta terapêutica. Assim, a instituição oportuna do tratamento adequado é determinante para reduzir a morbimortalidade e melhorar o prognóstico dos pacientes.

Palavras-chave: Isquemia Mesentérica Aguda (IMA). Angiotomografia Computadorizada (Angio-TC). Manejo Terapêutico.

RESUMEN

Introducción: La isquemia mesentérica aguda (IMA) es una emergencia vascular que ocurre cuando hay una interrupción súbita del flujo sanguíneo hacia los órganos viscerales. Debido a que presenta síntomas similares a otras enfermedades abdominales comunes, a menudo se pasa por alto en las etapas iniciales.

Objetivo: Reunir y sistematizar la evidencia más reciente sobre el diagnóstico y tratamiento de la IMA, con enfoque en estrategias para mejorar la evolución de los pacientes.



Metodología: Se realizó una revisión narrativa de la literatura a través de la base de datos PubMed, incluyendo artículos publicados en los últimos cinco años, disponibles en texto completo en portugués o inglés.

Resultados y Discusión: La angiotomografía computarizada se ha consolidado como el método de referencia para el diagnóstico de la IMA, ya que permite visualizar con precisión las obstrucciones vasculares y los cambios en la pared intestinal. El abordaje terapéutico depende de la causa de la isquemia. En las oclusiones arteriales, se prioriza la revascularización mediante cirugía o técnicas endovasculares. En la trombosis venosa mesentérica, el tratamiento inicial es clínico, con anticoagulación. En la oclusión arterial, la principal prioridad es restaurar el flujo sanguíneo adecuado. En la isquemia no oclusiva, el enfoque se centra en corregir el estado de bajo flujo sanguíneo y en el uso de vasodilatadores. En los casos con sospecha de necrosis intestinal, la laparotomía es indispensable para evaluar la viabilidad intestinal.

Conclusión: El diagnóstico precoz, junto con el uso de métodos de imagen como la angiotomografía computarizada, es fundamental para la rápida definición de la conducta terapéutica. Por lo tanto, la instauración oportuna del tratamiento adecuado es determinante para reducir la morbimortalidad y mejorar el pronóstico de los pacientes.

Palabras clave: Isquemia Mesentérica Aguda (IMA). Angiotomografía Computarizada (Angio-TC). Manejo Terapéutico.



1 INTRODUCTION

Acute mesenteric ischemia (AMI) is a highly lethal vascular emergency, characterized by the sudden interruption of blood flow to the visceral organs, resulting in a mismatch between oxygen supply and tissue metabolic demand (Audu et al., 2024; Lenzion et al., 2022). It is a rare complication, corresponding to approximately 0.09% to 0.2% of hospital admissions, but associated with a high mortality rate. Although its occurrence is relatively uncommon, an increase in incidence is observed with advancing age. In this context, early diagnosis, combined with the appropriate institution of treatment, is essential to favor the patient's complete recovery. AMI predominantly affects elderly patients, with a mean age at diagnosis of around 70 years, and is three times more frequent in women than in men. With aging, the risk increases significantly, it is estimated that an 80-year-old patient has an approximately ten times higher risk of developing the condition compared to a 60-year-old patient (BALA et al., 2022; AUDU et al., 2024).

Without a timely revascularization intervention, the mortality rate can reach 80%, although advances in early diagnosis and endovascular techniques have the potential to reduce these rates to levels close to 50% (Lenzion et al., 2022). The condition is often underdiagnosed in its early stages due to the overlap of its symptoms with other less severe abdominal pathologies (Audu et al., 2024; Yu and Kirkpatrick, 2023).

The etiology of MAI is subdivided into four main categories: mesenteric arterial embolism, mesenteric arterial thrombosis, non-occlusive mesenteric ischemia (NOMI), and mesenteric venous thrombosis (TVM) (Bala et al., 2022; Yu and Kirkpatrick, 2023). Rapid recognition of these subtypes is crucial, as each requires a distinct therapeutic approach, ranging from systemic anticoagulation and the use of vasodilators to complex or endovascular surgical revascularization (Bala et al., 2022; Ahmed, 2021). Bala et al. also highlight that clinical outcomes tend to be more favorable when management is carried out by a multidisciplinary team. However, the surgical approach is not always the best therapeutic option, and the decision should consider the extent of intestinal ischemia, the patient's clinical conditions, comorbidities, and age. In certain situations, it may be more appropriate to adopt palliative measures, focusing on the patient's comfort and quality of life. The aim of this review is to synthesize the latest evidence on diagnostic protocols and the most appropriate management of AMI to optimize prognosis and improve outcome. The pathophysiology of acute mesenteric ischemia is related to the abrupt reduction of mesenteric blood flow, resulting in a decrease in oxygen supply to



intestinal tissues and consequent imbalance between metabolic supply and demand. This process triggers a series of pathophysiological events, including injury to the intestinal mucosa, increased permeability of the intestinal barrier, bacterial translocation, and activation of a systemic inflammatory response. Several risk factors are associated with the development of the disease, such as advanced age, atrial fibrillation, atherosclerosis, heart failure, and hypercoagulable states. The nonspecific nature of the initial symptoms often leads to diagnostic delays, contributing significantly to the high mortality rates observed in this condition (AUDU et al., 2024; BALA et al., 2022; YU; KIRKPATRICK, 2023).

2 METHODOLOGY

The present study is characterized as a narrative literature review, developed with the objective of synthesizing and analyzing the most recent scientific evidence related to the Therapeutic Management of Acute Mesenteric Ischemia. The search was carried out in the PubMed database, using the descriptors "Mesenteric Ischemia", "Treatment" and "Diagnosis", combined by means of the Boolean operators AND and OR, according to the terminology of Medical Subject Headings (MeSH). Articles published in the last five years, available in full and written in Portuguese or English, that directly addressed the topic, were included. Studies that did not have a direct relationship with the central theme, duplicate publications, narrative reviews with low methodological rigor, and articles not indexed in the database used were excluded. The selection of studies was conducted in two stages: screening of titles and abstracts, followed by the evaluation of full texts to confirm relevance. The information extracted was organized in a descriptive way.

3 RESULTS AND DISCUSSION

Initial management of suspected acute mesenteric ischemia requires rapid clinical stabilization and prompt supportive measures. Among the recommended initial approaches are aggressive volume replacement to optimize systemic perfusion, the administration of broad-spectrum antibiotics to prevent bacterial translocation, and early initiation of systemic anticoagulation when mesenteric venous thrombosis or arterial occlusion is suspected. Laboratory findings, such as metabolic acidosis, elevated serum lactate, and leukocytosis, may aid in clinical suspicion, although they are not specific enough to establish the diagnosis alone. Thus, the association between high clinical



suspicion and early imaging is essential to improve the clinical outcomes of patients (AUDU et al., 2024; BALA et al., 2022). In the hemodynamic management of these patients, the choice of vasoactive agents is not indifferent. Catecholamines such as norepinephrine and epinephrine can aggravate mesenteric hypoperfusion, which is the opposite of what is desired. Agents such as dobutamine and milrinone have been preferred precisely because they exert less vasoconstrictive effect on splanchnic circulation, better preserving intestinal flow (BALA et al., 2022).

3.1 DIAGNOSTIC IMAGING: THE ROLE OF CT ANGIOGRAPHY

Computed tomography angiography (CTA) has established itself as the gold standard for the diagnosis of AMI, with high sensitivity and specificity. The use of biphasic protocols, covering the arterial and venous phases, is recommended to allow direct visualization of thrombi or emboli in the mesenteric vessels (Yu and Kirkpatrick, 2023; Bala et al., 2022). Non-vascular findings such as bowel wall thickening, intestinal pneumatosis, and portal vein gas, while common, are often indicators of advanced ischemia or irreversible transmural necrosis (Yu and Kirkpatrick, 2023). Implementing techniques such as dual-energy CT can improve the early detection of bowel wall enhancement failures, aiding in immediate clinical decision (Yu and Kirkpatrick, 2023).

Although imaging methods play a central role in the diagnosis of acute mesenteric ischemia, laboratory tests can provide important complementary information. Elevated serum lactate levels are often associated with more advanced stages of intestinal ischemia and reflect the occurrence of anaerobic metabolism due to tissue hypoperfusion. Other laboratory abnormalities may include leukocytosis, metabolic acidosis, and elevated D-dimer. However, these markers have limited sensitivity and specificity, and are not sufficient to confirm or exclude the diagnosis in isolation. For this reason, its interpretation must be carried out in conjunction with clinical and radiological findings (AHMED, 2021; AUDU et al., 2024).

The use of laboratory markers in the setting of acute mesenteric ischemia should be interpreted with caution. Although changes such as elevation of serum lactate, leukocytosis, and metabolic acidosis are often observed, these parameters often reflect more advanced stages of intestinal hypoperfusion and anaerobic metabolism. Thus, isolated laboratory values do not have sufficient sensitivity to exclude the disease in the early stages. In this scenario, it is recommended that biomarkers be used as



complementary tools in the assessment of clinical severity and in the monitoring of patient evolution, always associated with clinical findings and imaging methods. Integration between laboratory data, clinical suspicion, and radiological examinations is essential to reduce diagnostic delays and improve clinical outcomes in acute mesenteric ischemia (AHMED, 2021; AUDU et al., 2024; BALA et al., 2022).

In addition to the identification of vascular alterations, CT angiography allows the evaluation of indirect signs of intestinal distress, such as dilation of the loops, edema of the intestinal wall, presence of intraperitoneal free fluid, and reduction or absence of intestinal wall enhancement after contrast administration. These findings are particularly relevant for the early identification of areas of hypoperfusion and for estimating the extent of intestinal involvement, helping to define the therapeutic strategy (Lendzion et al., 2022; Bala et al., 2022).

Another important aspect of CT angiography is its ability to differentiate the main etiologies of acute mesenteric ischemia. In cases of embolism or arterial thrombosis, the test can directly demonstrate obstruction of the superior mesenteric artery or its branches, while in mesenteric venous thrombosis it is possible to identify thrombi in the mesenteric venous system, often associated with thickening of the intestinal wall and the presence of ascites (Ahmed, 2021; Bala et al., 2022). In non-occlusive mesenteric ischemia, CTA may show signs of intestinal hypoperfusion even in the absence of evident vascular obstruction, suggesting a mechanism related to states of low cardiac output or mesenteric vasoconstriction (Bala et al., 2022; Lendzion et al., 2022).

In addition, the multiplanar reconstruction of the images allows a detailed analysis of the mesenteric vascular anatomy, facilitating the identification of the exact site of occlusion and the evaluation of collateral circulation. This information is essential for therapeutic planning, especially when considering the possibility of endovascular or surgical revascularization interventions (Bala et al., 2022; Yu and Kirkpatrick, 2023).

Therefore, the early use of CT angiography in patients with clinical suspicion of acute mesenteric ischemia is essential to reduce diagnostic delays, since the rapid progression of intestinal ischemia can lead to transmural necrosis and significantly increase morbidity and mortality. Therefore, the rapid performance of this test is a crucial step in the diagnostic approach and in directing the appropriate management of these patients (Lendzion et al., 2022; Bala et al., 2022).



Delay in diagnosis remains one of the main determinants of mortality in acute mesenteric ischemia, since progression to intestinal necrosis can occur within a few hours of the onset of mesenteric hypoperfusion. Thus, the early identification of the clinical picture associated with the timely use of imaging methods, especially computed tomography angiography, is essential to guide the therapeutic approach and increase the chances of intestinal preservation. The speed of decision-making allows the implementation of revascularization strategies or surgical intervention before the development of irreversible intestinal damage (AUDU et al., 2024; BALA et al., 2022).

3.2 MANAGEMENT OF ARTERIAL OCCLUSIONS

For patients with acute arterial occlusion, reestablishment of blood flow is the absolute priority. Surgical embolectomy remains a viable option, but the use of endovascular techniques, such as angioplasty with stenting or catheter-directed thrombolysis, has shown superior results in terms of reducing morbidity and length of hospital stay in specific subgroups (Lendzion et al., 2022; Bala et al., 2022). In cases of non-occlusive ischemia (NOMI), treatment focuses on correcting the underlying cause of low cardiac output and using intra-arterial vasodilators, such as papaverine, to reverse mesenteric vasospasm (Bala et al., 2022; Lendzion et al., 2022).

The choice between the open or endovascular approach depends on the patient's hemodynamic stability and the presence of signs of peritoneal irritation. In patients without peritonitis, endovascular treatment has been preferred because it has lower rates of systemic complications and lower 30-day mortality when compared to open surgery (BALA et al., 2022; LENDZION et al., 2022). In addition, the location of the obstruction influences the strategy: embolisms tend to lodge in more distal segments of the superior mesenteric artery (SMA), while arterial thrombosis often occurs at the origin of the vessel, over pre-existing atherosclerotic plaques (AUDU et al., 2024; BALA et al., 2022). In the specific case of non-occlusive mesenteric ischemia (NOMI), in addition to the use of vasodilators such as papaverine, it is imperative to interrupt, whenever possible, the use of vasopressor agents (such as noradrenaline) and digitalis, which exacerbate mesenteric vasospasm (LENDZION et al., 2022; BALA et al., 2022). Treatment success in NOMI is monitored by clinical improvement and, in some protocols, by serial angiograms to assess response to vasodilator treatment (BALA et al., 2022).



3.3 MESENTERIC VENOUS THROMBOSIS (TVM)

Mesenteric venous thrombosis (TVM) is one of the least common causes of AMI, accounting for 5 to 10% of cases (Audu; Schechtman; Davis, 2023). It consists of acute thrombosis of the superior mesenteric vein and its tributaries, leading to visceral hypoperfusion, and may be idiopathic or secondary to other abdominal pathologies. According to Lenzion, Frahm-Jensen, and Keck (2022, p. 228), "90% of cases are related to thrombophilia, trauma, or local inflammatory states", which makes evident the relationship between Virchow's triad (stagnant blood flow, inflammation of the vascular endothelium, and hypercoagulability) and the occurrence of MVT. It is also noted that MVT ischemia is more gradual when compared to arterial ischemia, even in cases of extensive clots, and infarction typically does not occur, except when there is significant involvement of the proximal peripheral arch or branches of the vasa recta (Yu; Kirkpatrick, 2023).

Unlike arterial causes, the initial management of MVT is predominantly clinical, based on immediate systemic anticoagulation with low molecular weight heparin or unfractionated heparin (Acosta and Salim, 2021; Ahmed, 2021). Early intervention aims to prevent the progression of the thrombus and the development of venous infarction. Endovascular therapy for TVM, including mechanical thrombectomy or thrombus aspiration, may be considered in patients who experience clinical deterioration despite adequate anticoagulation (Acosta and Salim, 2021).

Anticoagulation should be started immediately with unfractionated or low molecular weight heparin, as delaying the start of therapy significantly increases the risk of intestinal infarction and the need for resection (ACOSTA and SALIM, 2021). The duration of oral anticoagulation after the acute phase should be at least six months, and may be lifelong in patients with documented hereditary hypercoagulability states (ACOSTA and SALIM, 2021; AHMED, 2021). Although the systemic route is the standard, in situ thrombolysis via transhepatic or transmesenteric catheter may be an option in cases of extensive vein thrombosis with imminent risk of necrosis, aiming to restore venous drainage and avoid short bowel syndrome (ACOSTA and SALIM, 2021). It is essential to highlight that CT angiography in the portal phase is the test of choice not only for the initial diagnosis, but also for the follow-up of venous recanalization (YU and KIRKPATRICK, 2023).



3.4 SURGICAL INTERVENTION AND FEASIBILITY ASSESSMENT

Damage control surgery plays a vital role when intestinal necrosis is suspected. Laparotomy allows direct inspection of the color, motility, and pulsation of the serosa vessels (Bala et al., 2022; Lenzion et al., 2022). Ancillary technologies, such as the use of intraoperative indocyanine green fluorescence (ICG), have been used to assess intestinal perfusion in real time, aiding in the precise delimitation of areas requiring resection and the preservation of viable segments (Lenzion et al., 2022). Performing a second-look laparotomy within 24 to 48 hours is a best practice to monitor ischemia progression in borderline segments (Bala et al., 2022).

The fundamental principle in occlusive IMA surgery is to "revascularize first, resect later", allowing marginally ischemic intestinal segments to regain perfusion before the final decision on resection (BALA et al., 2022). Assessing gut viability through indocyanine green fluorescence (ICG) offers an objective advantage over clinical judgment alone, as it allows visualization of gut wall microcirculation that may not be apparent in white light (LENDZION et al., 2022). In situations of severe hemodynamic instability or generalized peritonitis, damage control surgery with temporary closure of the abdomen (open abdomen) is recommended, postponing the reconstruction of intestinal transit to second-look laparotomy (BALA et al., 2022). Finally, the use of biomarkers such as elevated serum lactate, although useful, should not be used as an isolated criterion to decide on resection, but rather as a warning sign for the severity of the systemic condition and the need for intensive support (AHMED, 2021; BALA et al., 2022).

3.5 CRITICAL CARE AND PROGNOSIS

Multidisciplinary management in the intensive care unit is essential for hemodynamic stabilization, correction of acid-base disorders, and nutritional support. In addition, optimization of systemic perfusion is essential to minimize the progression of intestinal ischemia and prevent multiple organ dysfunction. Ventilatory support and tight control of metabolic parameters may also be necessary in patients with advanced systemic impairment (Audu et al., 2024;). In patients who progress to short bowel syndrome after extensive resections, the use of intestinal rehabilitation therapies such as the GLP-2 analogue (teduglutide) may reduce the need for long-term parenteral support (Bala et al., 2022).



The prognosis of mesenteric ischemia is poor, particularly in late-diagnosed cases. Mortality remains high, especially when there is extensive intestinal necrosis or development of sepsis and multiple organ failure. Thus, early identification of the condition, combined with rapid surgical or endovascular intervention to reestablish blood flow, is crucial to improve clinical outcomes. Patients who receive diagnosis and treatment in the early stages have higher survival rates and less need for extensive bowel resections (Audu et al., 2024).

The factors that stand out as the main determinants of the outcome of MAI are the speed of diagnosis and the extent of intestinal damage. When recognition of the condition is delayed, ischemia tends to progress to irreversible transmural necrosis, paving the way for sepsis and multi-organ failure. The need for extensive bowel resection is associated with higher morbidity and mortality and the development of short bowel syndrome in survivors (AUDU et al., 2024; LENDZION et al., 2022).

In addition, the mortality of Acute Mesenteric Ischemia is significant. Studies point to hospital rates that reach 63% in cases of mesenteric infarction, with worse outcomes in arterial forms compared to venous thrombosis (Ahmed, 2021).

4 CONCLUSION

Acute mesenteric ischemia (AMI) remains a vascular emergency of high clinical impact, especially in elderly and chronically ill patients. Requiring a critical balance between diagnostic speed and therapeutic accuracy, the evolution of the last few decades has allowed for a paradigm shift, with the potential to reduce historically prohibitive mortality rates when intervention is timely and evidence-based. Time is undeniably the primary biological determinant, since delays in diagnosis — especially longer than 24 hours — are associated with significant reductions in survival.

The success of the clinical outcome depends on a chain of care that begins with a high index of clinical suspicion. The central pillar of this approach is Computed Tomography Angiography (CTA), with the adoption of biphasic protocols, essential not only to confirm ischemia, but also to differentiate its four main etiologies: arterial embolism, arterial thrombosis, mesenteric venous thrombosis (TVM) and non-occlusive ischemia (NOMI).

The therapeutic strategy should be individualized based on the etiology and extent of intestinal involvement. While arterial occlusions often require urgent revascularization,



with an increasing preference for less invasive endovascular techniques (angioplasty and thrombolysis), MVT requires initial management focused on immediate systemic anticoagulation. In the surgical field, essential in the suspicion of necrosis, the principle of "revascularize first and resect later" is the gold standard to maximize the preservation of intestinal length. Ancillary technologies, such as indocyanine green fluorescence angiography (ICG), provide an objective assessment of tissue viability in real time, aiding in the precise delimitation of resections. For patients who develop short bowel syndrome post-resection, new rehabilitation therapies, such as the use of GLP-2 analogues (teduglutide), represent a significant advance.

It is concluded that the continuous improvement of IMA prognosis is intrinsically linked to the performance of multidisciplinary teams that include surgeons, radiologists and intensivists. The agility in performing CTA and the readiness to restore blood flow are, and will continue to be, the factors that define the boundary between the patient's recovery and the fatal outcome, reinforcing the importance of constant updating of health professionals.

REFERENCES

- Acosta, S., & Salim, S. (2021). Management of acute mesenteric venous thrombosis: A systematic review of contemporary studies. *Scandinavian Journal of Surgery*, 110(2), 123–129.
- Ahmed, M. (2021). Ischemic bowel disease in 2021. *World Journal of Gastroenterology*, 27(29), 4746–4762.
- Audu, C. O., Schechtman, D. W., & Davis, F. M. (2024). Mesenteric ischemia. *Clinics in Colon and Rectal Surgery*, 37, 417–423.
- Bala, M., et al. (2022). Acute mesenteric ischemia: Updated guidelines of the World Society of Emergency Surgery. *World Journal of Emergency Surgery*, 17, 54.
- Lenzion, R. J., Frahm-Jensen, G., & Keck, J. (2022). Acute mesenteric ischemia. *Clinics in Colon and Rectal Surgery*, 35, 227–236.
- Yu, H., & Kirkpatrick, I. D. C. (2023). An update on acute mesenteric ischemia. *Canadian Association of Radiologists' Journal*, 74(1), 160–171.