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OPINION ARTICLE

Review of the therapeutic paradigm in complex benign diseases: diverticular disease as an evidence model

Revisión del paradigma terapéutico en enfermedades benignas complejas: la enfermedad diverticular como modelo de evidencia

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ABSTRACT

Diverticular disease of the colon, traditionally considered a benign condition with standardized management, has undergone a significant transformation in its clinical approach over the last decade. This opinion piece analyzes the transition from interventional strategies to individualized conservative

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approaches, based on recent evidence. Changes in the management of uncomplicated acute diverticulitis, the selective role of antibiotics, updated surgical indications, and the importance of shared decision-making are discussed. It is concluded that even benign conditions require constant critical review of the evidence to optimize outcomes and conserve healthcare resources.

Keywords: diverticular disease, acute diverticulitis, conservative management, elective surgery, shared decision-making.

RESUMEN

La enfermedad diverticular del colon, tradicionalmente considerada una patología benigna de manejo estandarizado, ha experimentado una transformación significativa en su abordaje clínico durante la última década. El presente artículo de opinión analiza la transición desde estrategias intervencionistas hacia enfoques conservadores individualizados, fundamentados en evidencia reciente. Se discuten los cambios en el manejo de la diverticulitis aguda no complicada, el rol selectivo de los antibióticos, las indicaciones quirúrgicas actualizadas y la importancia de la toma de decisiones compartida. Se concluye que incluso las patologías benignas requieren constante revisión crítica de su evidencia para optimizar resultados y preservar recursos sanitarios.

Palabras clave: enfermedad diverticular, diverticulitis aguda, manejo conservador, cirugía electiva, toma de decisiones compartida.

Benign diseases of the digestive system, particularly diverticular disease of the colon, have historically been managed with rigid protocols based on the frequency of episodes and anatomical classification. However, the accumulation of robust scientific evidence has challenged established paradigms, revealing that even in pathologies considered "simple," management requires increasing individualization. Diverticular disease represents an exemplary model of this evolution: its rising prevalence in Western populations, combined with the need to optimize healthcare resources, has driven a critical review of conventional therapeutic strategies [(1)].

The objective of this article is to analyze the fundamental changes in the management of complex diverticular disease, highlighting how contemporary evidence has modified the indications for medical versus surgical treatment, the use of antibiotics, and hospitalization criteria.

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The Paradigm Shift in Uncomplicated Acute Diverticulitis

The traditional management of uncomplicated acute diverticulitis (Hinchey classification 0-Ia) included routine hospitalization, fasting, intravenous hydration, and systematic antibiotic therapy. This practice, entrenched for decades, has been questioned by recent controlled clinical trials demonstrating the safety of selective outpatient management and the conservative use of antibiotics [2].

Trials such as AVOD, DIABOLO, and DINAMO have established that managing uncomplicated diverticulitis without antibiotics is not associated with worse outcomes in terms of complications, recurrences, or mortality, while also reducing the length of hospital stay [2]. The American Gastroenterological Association (AGA) and the American Society of Colon and Rectal Surgeons (ASCRS) now recommend the selective use of antibiotics, reserving them for patients with signs of significant systemic infection, severe comorbidities, or immunosuppression [1, 6].

This transition represents a fundamental shift in mindset: from treating all diverticulitis aggressively towards risk stratification that prioritizes observation and treatment individualization. The authors consider this approach to represent a significant advance towards precision medicine in previously standardized pathologies. Oral treatment has proven to be as effective as intravenous therapy in selected patients, facilitating outpatient management and reducing costs without compromising safety [2].

Management of Complicated Diverticulitis: Between Conservation and Surgery

Complicated diverticulitis presents a spectrum of severity requiring individualized decision-making. For small abscesses (<4 cm), antibiotic therapy may suffice, while larger collections benefit from image-guided percutaneous drainage, allowing elective surgery to be deferred and reducing the morbidity and mortality associated with emergency procedures [2, 6].

In cases of purulent peritonitis (Hinchey III), controversy persists regarding laparoscopic lavage and drainage versus colonic resection. Although initially promising, studies such as SCANDIV, DILALA, and LOLA have shown that laparoscopic lavage in Hinchey III is associated with higher rates of persistent peritonitis and reoperations, limiting its indication to highly selected cases [2]. The authors suggest that, given these results, the surgical community must

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reconsider the initial enthusiasm for laparoscopic lavage and reserve it for highly selected patients with absolute contraindications for resection.

For fecal peritonitis (Hinchey IV), resective surgery remains the standard, with a preference for primary anastomosis with diverting ileostomy over Hartmann's procedure in stable patients, given the better functional outcomes and fewer complications demonstrated in trials such as DIVERTI and LADIES [2].

Elective Surgery: Individualization versus Protocol

The indication for elective surgery following recurrent episodes of diverticulitis has evolved significantly. The traditional recommendation for resection after two episodes has been replaced by an individualized approach based on quality of life, persistence of symptoms, immunosuppression, and risk of complications [2, 6].

The LASER trial (2025) compared elective sigmoid resection versus conservative management in patients with recurrent, complicated, or persistently painful diverticulitis. The results showed that surgery prevents recurrences (14% versus 87%) without increasing complications, although it did not significantly improve quality of life in the intention-to-treat analysis. Notably, the high crossover rate [32%] from the conservative group to surgery suggests that early intervention may be preferable in patients with low baseline quality of life [8].

The authors consider that these findings emphasize the need for a multidimensional evaluation that includes patient factors, disease severity, and informed preferences, beyond simply counting episodes. Furthermore, the authors propose that the surgical decision should be made in the context of a multidisciplinary consultation that assesses not only the anatomy but also the functional and psychological impact of the recurrent disease.

Special Considerations and Vulnerable Populations

Individualization of management becomes even more relevant in special populations. Immunocompromised patients have a higher risk of complications and mortality, requiring a lower threshold for surgical indication [1,2]. In older adults, frailty and comorbidities must be carefully weighed: conservative management is prioritized, but with close surveillance given the higher risk of non-operative failure in perforations [1].

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The authors note that care in older adults represents a particular challenge, where evidence-based medicine must be balanced with a comprehensive geriatric approach. Diverticulitis in the right colon, more prevalent in Asia, generally has a better prognosis and can be managed conservatively in most cases, illustrating how regional epidemiology influences therapeutic strategies [(2)].

Diverticular disease exemplifies how complex benign pathologies require constant revision of their management based on updated evidence. The fundamental changes include: (1) the abandonment of systematic antibiotic therapy in uncomplicated diverticulitis; (2) the individualization of elective surgery beyond counting episodes; (3) the preference for primary anastomosis over Hartmann's procedure in selected emergency surgery; and (4) the importance of shared decision-making considering quality of life and comorbidities.

The authors conclude that this evolution towards more conservative and personalized management does not imply less rigor, but quite the opposite: it demands a deep understanding of the evidence, risk stratification skills, and effective communication with the patient. Coloproctologists must lead this transition, promoting evidence-based practices that optimize clinical outcomes and preserve healthcare resources. Finally, the authors suggest that future research should focus on identifying predictive biomarkers for recurrence and complications, enabling even more precise risk stratification.

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CONFLICT OF INTEREST

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