



A new era in IBD management: the rise of intestinal ultrasound in Latin America

Una nueva era en el manejo de la enfermedad inflamatoria intestinal: el surgimiento del ultrasonido intestinal en América Latina

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Inflammatory bowel disease (IBD), encompassing Crohn's disease (CD) and ulcerative colitis (UC), presents a significant burden to the healthcare systems, particularly with unplanned healthcare utilization as one of the highest costs⁽¹⁾. Accurate diagnosis, disease monitoring, and timely treatment adjustments are crucial for optimal patient outcomes. While colonoscopy remains a gold standard for IBD diagnosis, its invasive nature can deter patients from regular follow-up⁽²⁾. This is where intestinal ultrasound (IUS) emerges as a game-changer.

IUS offers a safe, non-invasive, and radiation-free alternative for assessing IBD activity. IUS can be performed at the bedside, allowing for real-time evaluation and immediate discussion of results with the patient^(3,4). This patient-centered approach encourages better communication and ultimately enhances the overall care experience with demonstrated patient preference over other monitoring tools⁽⁵⁾.

Studies have shown IUS to accurately detect disease activity, bowel wall thickness, blood flow, inflammatory fat, and lymph nodes – all markers of inflammation⁽⁶⁾. It can also detect complications like strictures, fistulas, and abscesses⁽⁷⁾. Furthermore, IUS is particularly well-suited for monitoring disease progression in special populations such as pregnant women, older adults, and children, where radiation exposure from other imaging techniques should be minimized^(8,9).

The International Bowel Ultrasound Study Group (IBUS) plays a vital role in ensuring standardized practice and reliable interpretation. IBUS offers comprehensive training programs for physicians, culminating in certification that guarantees competence in IUS for IBD assessment (<https://ibus-group.org/education/#curriculum>). This standardization guarantees trust and facilitates the wider implementation of IUS across healthcare systems.

Latin America: embracing IUS for improved IBD care

The benefits of IUS extend significantly to regions like Latin America, where access to advanced diagnostic tools might be limited in some regions⁽¹⁰⁾. The affordability, portability, and ease of use of IUS make it a valuable addition to the IBD management arsenal. By incorporating IUS into routine care, healthcare providers in Latin America can:

- **Increase diagnostic accuracy and disease monitoring:** Early identification of disease activity allows for prompt treatment adjustments, potentially preventing complications and hospitalizations. IUS can also monitor response to treatment, allowing for adjustments to be made quickly⁽¹¹⁻¹⁴⁾.

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- **Enhance patient experience:** The non-invasive nature of IUS promotes patient comfort and reduces anxiety associated with invasive procedures like colonoscopy ⁽⁵⁾.
- **Optimize resource allocation:** IUS is a cost-effective tool compared to other imaging modalities, allowing healthcare systems to allocate resources more efficiently ⁽¹⁵⁾. This is particularly relevant in Latin America, where public healthcare budgets might be constrained.
- **Improve access to care in remote areas:** The portability of IUS equipment makes it suitable for use in resource-limited settings, bringing essential diagnostic tools closer to patients ⁽¹⁶⁾. This can significantly improve access to IBD care, especially in geographically vast and rural regions.

IBD activity assessment with IUS

Standardizing the interpretation of IUS findings is paramount for accurate disease assessment. Experts have proposed scores that can be used with high reliability.

- **IBUS- Segmental Activity Score (IBUS-SAS) for CD:** This scoring system evaluates bowel wall thickness (BWT), stratification, vascularization, and the presence of inflammatory fat. By assigning scores to each segment, IBUS-SAS quantitatively assesses disease activity in CD patients ⁽¹⁷⁾. This allows for objective comparison of disease severity over time and between patients and has been correlated with endoscopy in exploratory studies ⁽¹⁸⁾.
- **Milan Ultrasound Criteria (MUC) for UC:** This system focuses on BWT and the presence of Doppler flow. These results have had external validation and endoscopic correlation ^(19,20). The calculation of the MUC is useful for disease monitoring; it may help identify patients with a negative disease course, including the need for corticosteroids and surgery ⁽²⁰⁾.

Implementing these scoring systems alongside IBUS training ensures consistent and reliable interpretation of ultrasound findings, facilitating communication between healthcare providers and enabling optimal patient management.

The future of IUS in Latin America

The potential of IUS in improving IBD management in Latin America is promising. Beyond improved diagnostics and patient care, the widespread adoption of IUS can open doors for research opportunities. The ease and safety of IUS make it ideal for including Latin American IBD patients in clinical trials. Currently, IBD clinical trials often need more representation by diverse populations and ethnicities, including those from Latin America ⁽²¹⁾. The non-invasive nature of IUS can encourage broader participation, leading to a more comprehensive understanding of IBD and the development of effective treatment strategies for a wider range of patients. This will ultimately improve the lives of individuals with IBD in Latin America and globally.

Further research is warranted to explore the role of IUS in predicting disease behavior and response to specific therapies. Additionally, initiatives promoting IBUS training and certification for healthcare professionals across the region are crucial for widespread the technique among physicians.

By embracing IUS as a valuable tool, Latin America can move towards a more patient-centered, efficient, and accessible approach to IBD care. This will ultimately improve the quality of life for countless individuals with this chronic condition.

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