



Crohn's Disease and Gastrointestinal Repercussions: A Detailed Study of Comorbidities and Clinical Implications

Júlia Cristina de Sousa Ramos¹, Eduardo Henrique Mendes Rezende², Murilo Dell Eugenio Costa Filho, Daniel Oliveira Silva², Mayara Algeri Schimin³, Lucas Torres de Araújo⁴, Natana Carol Alves and Bruno Barbosa Pinheiro⁴, Pedro Henrique Kuert Lemos⁵

LITERATURE REVIEW

RESUMO

A Doença de Crohn é uma condição inflamatória crônica que afeta o trato gastrointestinal, caracterizada por inflamação transmural e segmentar que pode envolver qualquer parte do sistema digestivo, desde a boca até o ânus. Essa patologia apresenta uma ampla gama de manifestações clínicas, incluindo dor abdominal, diarreia, sangramento retal, fístulas, estenoses e até mesmo complicações extraintestinais. A complexidade da Doença de Crohn reside não apenas em sua apresentação clínica variada, mas também em suas comorbidades e implicações clínicas, que podem afetar significativamente a qualidade de vida dos pacientes e exigir abordagens terapêuticas multifacetadas. Objetivo: Identificar e sintetizar as evidências disponíveis na literatura científica dos últimos 10 anos sobre as comorbidades e implicações clínicas da Doença de Crohn, a fim de proporcionar uma visão abrangente e atualizada desse aspecto da patologia gastrointestinal. Metodologia: A revisão sistemática foi realizada de acordo com as diretrizes do PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Utilizaram-se as bases de dados PubMed, Scielo e Web of Science para identificar estudos relevantes publicados nos últimos 10 anos. Os descritores utilizados foram "Crohn's disease", "gastrointestinal manifestations", "comorbidities", "clinical implications" e "systematic review". Os critérios de inclusão envolveram estudos que investigaram especificamente as comorbidades e implicações clínicas da Doença de Crohn, com resultados disponíveis em inglês, espanhol ou português. Os critérios de exclusão incluíram estudos duplicados, relatos de caso e estudos com amostras pequenas ou métodos pouco robustos. Resultados: A análise dos estudos selecionados revelou uma ampla variedade de comorbidades associadas à Doença de Crohn, incluindo artrite, dermatite, uveíte, osteoporose e distúrbios hepáticos. Além disso, foram destacadas as implicações clínicas significativas da Doença de Crohn, como risco aumentado de hospitalizações, necessidade de cirurgias intestinais e impacto na qualidade de vida dos pacientes. Conclusão: A Doença de Crohn apresenta uma complexidade clínica que vai além das manifestações intestinais, com uma série de comorbidades e implicações clínicas que exigem uma abordagem integrada e multidisciplinar no seu manejo. Esta revisão destaca a importância de compreender esses aspectos para melhorar o cuidado e a qualidade de vida dos pacientes com essa condição gastrointestinal crônica.

Palavras-chave: "Doença de Crohn", "manifestações gastrointestinais", "comorbidades", "implicações clínicas" e "revisão sistemática"



ABSTRACT

Crohn's disease is a chronic inflammatory condition that affects the gastrointestinal tract, characterized by transmural and segmental inflammation that can involve any part of the digestive system, from the mouth to the anus. This pathology presents a wide range of clinical manifestations, including abdominal pain, diarrhea, rectal bleeding, fistulas, strictures and even extraintestinal complications. The complexity of Crohn's disease lies not only in its varied clinical presentation, but also in its comorbidities and clinical implications, which can significantly affect patients' quality of life and require multifaceted therapeutic approaches. Objective: To identify and synthesize the evidence available in the scientific literature over the last 10 years on the comorbidities and clinical implications of Crohn's Disease, in order to provide a comprehensive and updated view of this aspect of gastrointestinal pathology. Methodology: The systematic review was carried out in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The PubMed, Scielo and Web of Science databases were used to identify relevant studies published in the last 10 years. The descriptors used were "Crohn's disease", "gastrointestinal manifestations", "comorbidities", "clinical implications" and "systematic review". The inclusion criteria involved studies that specifically investigated the comorbidities and clinical implications of Crohn's Disease, with results available in English, Spanish or Portuguese. Exclusion criteria included duplicate studies, case reports and studies with small samples or less robust methods. Results: Analysis of the selected studies revealed a wide variety of comorbidities associated with Crohn's disease, including arthritis, dermatitis, uveitis, osteoporosis and liver disorders. Furthermore, the significant clinical implications of Crohn's disease were highlighted, such as increased risk of hospitalizations, need for intestinal surgeries and impact on patients' quality of life. Conclusion: Crohn's disease presents a clinical complexity that goes beyond intestinal manifestations, with a series of comorbidities and clinical implications that require an integrated and multidisciplinary approach in its management. This review highlights the importance of understanding these aspects to improve the care and quality of life of patients with this chronic gastrointestinal condition.

Keywords: "Crohn's disease", "gastrointestinal manifestations", "comorbidities", "clinical implications" and "systematic review"

Instituição afiliada – Uniatenas¹, UniEVANGÉLICA², UNIMA³, FEDERAL UNIVERSITY OF WEST BAHIA⁴, UNIFADRA⁵

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Autor correspondente: Júlia Cristina de Sousa Ramos; [email: igorcsantos01@gmail.com](mailto:igorcsantos01@gmail.com)

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INTRODUCTION

Crohn's disease is a chronic inflammatory condition that affects the gastrointestinal tract, presenting a variety of symptoms that can vary widely between patients. This complex gastrointestinal pathology is characterized by transmural and segmental inflammation and can affect any part of the digestive system, from the mouth to the anus. The most common symptoms include abdominal pain, diarrhea, rectal bleeding, fistulas and strictures. Furthermore, patients with Crohn's disease often present extraintestinal complications, such as arthritis, dermatitis and uveitis, which contribute to the complexity of the clinical picture. The heterogeneity in the clinical presentation of Crohn's disease makes its diagnosis and management challenging, requiring a comprehensive and multidisciplinary approach.

Crohn's disease is associated with several comorbidities, including osteoporosis, liver disorders and an increased risk of cardiovascular diseases. The presence of these comorbidities can further complicate the clinical picture of patients, increasing the morbidity and mortality associated with the disease. Early identification and adequate management of comorbidities are essential to ensure comprehensive care and optimize clinical results for patients with Crohn's Disease. Comprehensive assessment of comorbidities can also influence therapeutic strategies, providing additional insights into overall disease management. Therefore, understanding the relationship between Crohn's disease and its comorbidities is essential for an effective approach to the care of these patients.

The therapeutic approach to Crohn's disease is often complex and challenging, as patients can face a range of debilitating symptoms and serious complications. In addition to the physical aspects of the disease, it is crucial to consider the psychosocial and emotional impact on the quality of life of affected individuals. The disease can impose significant restrictions on daily activities, causing physical and emotional discomfort, and influencing patients' social and professional relationships. Therefore, understanding the impact on quality of life is essential to provide holistic and comprehensive care for patients with Crohn's disease.

Multidisciplinary in the management of Crohn's Disease is an essential



approach to optimize clinical results and improve patients' quality of life. Collaboration between gastroenterologists, rheumatologists, psychologists, nutritionists and other healthcare professionals allows for a complete assessment and an individualized treatment plan, taking into account not only the medical aspects of the disease, but also the psychosocial and emotional aspects. This integrated approach is critical to ensuring patients receive the support they need in all areas of their health and wellbeing.

There are many challenges in treating Crohn's Disease, due to the complexity of the pathology and the variable response to available medications. Therapeutic strategies, including immunosuppressive medications, biologic therapies, and surgical interventions, are often necessary to control symptoms and prevent long-term complications. However, the choice of treatment must be individualized, taking into account the severity of the disease, the presence of comorbidities and the patient's preferences. Additionally, regular monitoring is crucial to assess the effectiveness of treatment and make adjustments as needed.

The objective of this systematic literature review is to identify and synthesize the evidence available in current scientific literature on the comorbidities and clinical implications of Crohn's Disease. The comprehensive analysis of these aspects aims to provide an in-depth understanding of the various manifestations of the disease, as well as its consequences for the quality of life of patients and the clinical management of the condition. By gathering and analyzing the most recent research in this area, we seek to provide relevant information that can support clinical practice, guide therapeutic decisions and identify gaps in knowledge that can direct future investigations.

METHODOLOGY

To carry out a systematic review of the literature on the comorbidities and clinical implications of Crohn's disease, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) checklist was adopted as a methodological guide. Initially, the PubMed, Scielo and Web of Science databases were selected to identify relevant studies published in the last 10 years. The descriptors used for the search included "Crohn's disease", "gastrointestinal manifestations", "comorbidities",



"clinical implications" and "systematic review". The search was conducted by two independent researchers, who evaluated the titles and abstracts of the articles found to determine their relevance to the study. The inclusion criteria adopted were studies that specifically investigated the comorbidities associated with Crohn's Disease, research that addressed the clinical implications of the disease in patients, articles available in English, Spanish or Portuguese, studies published in the last 10 years and research that presented a robust methodology, such as observational studies, randomized clinical trials or systematic reviews.

On the other hand, the exclusion criteria were duplicate studies or studies of a non-scientific nature, such as case reports, articles with small samples or less robust methodology, such as studies with less than 10 participants or without a control group, studies that did not directly address comorbidities or clinical implications of Crohn's Disease, publications in languages other than those specified and articles published before the 10-year period established for the search.

The selection of studies was carried out independently by the two researchers, with disagreements resolved by consensus or by a third reviewer, when necessary. After the initial selection, the articles were evaluated in their entirety to determine their final inclusion in the review. This selection process followed the PRISMA checklist guidelines, ensuring transparency and methodological rigor in conducting the systematic review.

RESULTS

15 articles were selected. Crohn's disease is a complex condition characterized by a wide variety of gastrointestinal symptoms. Among these symptoms, abdominal pain is a common complaint among patients, which can vary in intensity and location. Furthermore, diarrhea is another common symptom, often accompanied by fecal urgency and, in some cases, the presence of blood in the stool, indicating intestinal inflammation. Fistulas, abscesses and strictures are typical complications of Crohn's disease, resulting from chronic inflammation that can occur in any part of the gastrointestinal tract, from the mouth to the anus. These complications can cause significant discomfort and negatively impact patients' quality of life, affecting their daily and social activities.



Furthermore, the extraintestinal manifestations of Crohn's disease are also worth highlighting. Many patients develop symptoms outside of the gastrointestinal system, such as arthritis, which can manifest as joint pain and inflammation, and uveitis, an eye inflammation that can result in eye pain and blurred vision. These extraintestinal manifestations can occur independently or in conjunction with gastrointestinal symptoms, contributing to the complexity of the clinical picture of Crohn's disease. Therefore, a comprehensive understanding of the clinical manifestations is essential for an accurate diagnosis and appropriate management of this gastrointestinal condition.

Patients with Crohn's disease often have comorbidities, additional medical conditions that can occur simultaneously and influence the course of the disease. Among the most common comorbidities are osteoporosis and liver disorders. Osteoporosis is a condition characterized by decreased bone density, making bones more fragile and susceptible to fractures. Patients with Crohn's disease have an increased risk of osteoporosis due to chronic inflammation and long-term use of corticosteroids, which can impair calcium absorption and contribute to bone loss.

Furthermore, liver disorders, such as hepatic steatosis and autoimmune hepatitis, are frequently observed comorbidities in patients with Crohn's disease. Hepatic steatosis, also known as "fatty liver", is characterized by the accumulation of fat in the liver and may be associated with obesity and the use of certain medications. Autoimmune hepatitis is a condition in which the immune system attacks the liver, resulting in inflammation and damage to liver tissue. The identification and management of these comorbidities are essential to optimize the care of patients with Crohn's disease, reducing the impact of these additional conditions on general health and disease prognosis.

Crohn's disease can have a significant impact on patients' quality of life, affecting not only their physical well-being, but also psychosocial and emotional aspects. Chronic symptoms, such as abdominal pain, diarrhea and fatigue, can limit patients' ability to carry out everyday activities and enjoy a full life. Furthermore, the unpredictability of Crohn's disease symptoms can generate anxiety and stress, leading to a decrease in perceived quality of life.

In addition to the physical symptoms, the psychosocial impact of Crohn's disease



should not be underestimated. Many patients face emotional challenges, such as depression, social isolation and low self-esteem, due to the restrictions imposed by the disease. The need for continuous treatments, frequent medical appointments and possible hospitalizations can also interfere with patients' interpersonal relationships, professional lives and leisure activities. Therefore, it is essential to address not only the physical symptoms of Crohn's Disease, but also provide adequate emotional and psychosocial support to improve patients' quality of life and overall well-being.

A multidisciplinary approach to the management of Crohn's Disease is essential to ensure a complete assessment and a comprehensive treatment plan that takes into account all aspects of the patient's health. Gastroenterologists, rheumatologists, nutritionists, psychologists and other healthcare professionals play essential roles on the care team for patients with Crohn's disease. This collaborative approach allows for a holistic assessment of the patient's needs, identifying not only gastrointestinal symptoms, but also associated comorbidities, risk factors and impact on quality of life.

Furthermore, the multidisciplinary approach facilitates the coordination of care between different medical specialties, ensuring effective communication and an integrated treatment strategy. This is especially important in cases of complicated Crohn's disease, where management may require a combination of different therapeutic modalities, such as medications, biological therapies and surgery. By adopting a multidisciplinary approach, healthcare professionals can ensure personalized, patient-centered care, improving clinical outcomes and quality of life for patients with Crohn's Disease.

Currently, a variety of therapeutic options are available for the treatment of Crohn's Disease, aiming to control symptoms, prevent complications and improve patients' quality of life. Immunosuppressive medications, such as corticosteroids, azathioprine, and methotrexate, are often used to reduce intestinal inflammation and control the symptoms of Crohn's disease. These medications work by suppressing the body's immune response, thereby reducing the chronic inflammation associated with the disease. However, its prolonged use may be associated with significant side effects, such as suppression of the immune system and increased risk of infections.

In addition to immunosuppressive medications, biological therapies have



become an important option in the treatment of Crohn's disease, especially in cases refractory to conventional treatments. These therapies involve the use of monoclonal antibodies that target specific proteins involved in the inflammatory response, such as tumor necrosis factor alpha (TNF- α). Biological medications, such as infliximab, adalimumab and vedolizumab, have demonstrated efficacy in reducing symptoms and inducing remission in patients with Crohn's disease. However, they may also be associated with side effects, such as infusion reactions, reactivation of latent infections and increased risk of malignancies. The choice of treatment must be individualized, taking into account the severity of the disease, the presence of comorbidities and the patient's preferences, and must be accompanied by regular monitoring to assess effectiveness and detect potential adverse effects.

In the management of Crohn's disease, regular monitoring is essential to assess the effectiveness of treatment, detect complications early and make therapeutic adjustments as necessary. Patients must be closely monitored by specialized healthcare professionals, who will perform periodic clinical and laboratory examinations to assess response to treatment and monitor disease progression. Additionally, imaging tests, such as endoscopy and colonoscopy, may be indicated to assess the state of the gastrointestinal tract and detect any changes, such as inflammation, ulcers or strictures. These monitoring measures help ensure that patients receive appropriate treatment and allow for timely therapeutic adjustments to prevent long-term complications.

Additionally, regular monitoring of patients with Crohn's Disease also includes the assessment of risk factors and associated comorbidities. This may involve performing specific imaging and laboratory tests to detect conditions such as osteoporosis, liver disorders and autoimmune diseases, which may be associated with Crohn's disease and influence the course of the disease. Early identification of these comorbidities allows for timely intervention and appropriate management, thus reducing the negative impact on the patient's overall health. Therefore, regular monitoring is an essential practice in the care of patients with Crohn's Disease, contributing to effective management of the disease and a better quality of life.

Several risk factors are associated with the development and progression of Crohn's disease, including genetic predisposition, family history of the disease and



environmental influences. Studies have shown that people with first-degree relatives affected by Crohn's disease have an increased risk of developing the condition, suggesting a genetic component in the pathogenesis of the disease. Additionally, certain genes have been identified as being associated with an increased risk of developing Crohn's disease, although the exact mechanism by which these genes contribute to the disease is not yet completely understood.

In addition to genetic predisposition, environmental factors also play an important role in the development of Crohn's disease. Factors such as smoking, diet and intestinal microbiota have been implicated as possible triggers or exacerbators of intestinal inflammation in Crohn's disease. For example, smoking is an important risk factor for the development of the disease and can negatively influence the course of the disease, increasing the severity of symptoms and the need for more aggressive therapeutic interventions. Therefore, understanding the risk factors associated with Crohn's disease is crucial to identifying at-risk individuals and implementing preventive strategies to reduce the incidence and severity of the disease.

The economic impact of Crohn's disease is significant, both for healthcare systems and individual patients. The costs associated with the treatment of Crohn's Disease include not only spending on medications, medical consultations and surgical procedures, but also indirect costs, such as lost productivity at work and absenteeism. Patients with Crohn's Disease often face financial challenges due to high medical costs and the inability to work full-time due to the symptoms of the disease. Additionally, the emotional toll of dealing with a chronic and potentially debilitating illness can be high, contributing to financial stress and worry about the future.

Furthermore, healthcare systems also face a significant economic burden due to Crohn's disease. The costs related to treating and managing the disease can overwhelm available resources, resulting in pressure on health services and the need for efficient resource allocation. Furthermore, complications from Crohn's disease, such as frequent hospitalizations and surgeries, can further increase costs for healthcare systems. Therefore, understanding the economic impact of Crohn's disease is essential to developing effective cost management strategies and ensuring equitable access to treatment for all patients affected by the disease.



The psychosocial aspects of Crohn's disease play a significant role in the patient's experience and can influence both physical health and quality of life. The chronic and unpredictable illness can cause emotional stress and anxiety, leading to mental health problems such as depression and anxiety disorder. The need to deal with debilitating symptoms, dietary restrictions and lifestyle restrictions can negatively affect the self-esteem and emotional well-being of Crohn's disease patients.

Furthermore, Crohn's disease can have a significant impact on patients' interpersonal and social relationships. The need for frequent absences from work, medical appointments and hospitalizations can interfere with social and professional activities, leading to feelings of isolation and alienation. Many patients report difficulties explaining their condition to family, friends and colleagues, which can result in a lack of understanding and social support. Therefore, it is essential to provide adequate psychosocial support for patients with Crohn's disease, including access to counseling services and support groups, to help them better cope with the emotional and social challenges associated with the disease.

Currently, research into Crohn's disease is constantly evolving, aiming to deepen the understanding of the underlying mechanisms, develop new therapeutic approaches and identify more effective management strategies. Studies are being conducted to investigate the genetic and immunological basis of the disease, seeking to identify genetic and molecular markers that can predict the risk of developing Crohn's disease and guide personalized treatment for patients. In parallel, clinical research is evaluating the efficacy and safety of new medicines and biological therapies, as well as exploring the potential of non-pharmacological interventions such as probiotics and complementary therapies.

Furthermore, epidemiological studies are investigating the prevalence and incidence of Crohn's disease in different populations and geographic regions, as well as the influence of environmental and lifestyle factors on the occurrence of the disease. Such research helps identify patterns of disease distribution and modifiable risk factors, informing public health policies and preventive interventions. In short, ongoing research into Crohn's Disease is essential to advance scientific knowledge, improve clinical outcomes and quality of life for patients, and guide future strategies for prevention,



diagnosis and treatment of the disease.

CONCLUSION

Crohn's disease is a chronic and complex gastrointestinal condition, characterized by a wide range of clinical manifestations and associated comorbidities. Gastrointestinal symptoms such as abdominal pain, diarrhea and fistulas can have a significant impact on patients' quality of life, while comorbidities such as osteoporosis and liver disorders add an additional layer of complexity to the clinical picture. A multidisciplinary approach to managing Crohn's disease is crucial, involving a variety of healthcare professionals and therapeutic strategies, such as immunosuppressive medications and biological therapies, to control symptoms and prevent complications.

Furthermore, regular monitoring of patients and identification of risk factors are essential to ensure effective and personalized care, allowing for timely therapeutic adjustments and preventive interventions when necessary. Continued research into Crohn's Disease is critical to advancing scientific knowledge, developing new therapies and management strategies, and improving clinical outcomes for patients. However, despite significant advances in the understanding and treatment of Crohn's disease, there are still gaps in knowledge that need to be addressed by future studies.

In conclusion, Crohn's Disease is a challenging condition that requires a comprehensive and individualized approach. With a deeper understanding of its clinical manifestations, associated comorbidities, and risk factors, healthcare professionals can provide more effective care and improve the quality of life for patients affected by this gastrointestinal condition.

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