



Editorial

Should we investigate respiratory diseases in inflammatory bowel disease patients?☆



¿Debemos investigar enfermedades respiratorias en pacientes con enfermedad inflamatoria intestinal?

In most of our hospitals, communication between pulmonology departments and inflammatory bowel disease (IBD) units is limited. There is some logic to this: until recently, IBD was relatively unknown and had little impact on departments other than gastroenterology. The 2 best known presentations of these remitting and relapsing chronic inflammatory disorders that primarily, but not exclusively, affect the intestine are ulcerative colitis and Crohn's disease. Their pathophysiology remains unknown, but the most widely accepted hypothesis at present is that it involves an aberrant immune response against intestinal microbiota, triggered by environmental factors, that occurs in genetically susceptible individuals.¹ The incidence and prevalence of these entities in our setting are increasing and this is undoubtedly the area that requires most resources in the gastroenterology specialty.²

Up to 50% of patients with IBD have at least one extra-intestinal manifestation (EIM) that can affect virtually any organ. The joints and the skin are the most frequently affected systems, while pulmonary involvement is conventionally considered as rare.³ However, newly published data have led us to push for a closer relationship between these two specialties.

Pulmonary manifestations associated with IBD were first described in 1976 in a series of 6 patients with chronic bronchial suppurations.⁴ Since then, a wide range of presentations that manifest as both airway and pulmonary parenchyma involvement has been described.⁵ In our setting, the most common cause of respiratory symptoms and the first to be considered in patients with IBD is drug-induced lung disease. This applies particularly to methotrexate, azathioprine, and aminosalicylates, which are commonly used in the treatment of these patients: discontinuation is usually sufficient to achieve remission of lung involvement.⁶ At this point it is important that a respiratory specialist confirms the type of involvement, possible reversibility after discontinuation of the drugs, and measures to be taken to prevent recurrence.

The prevalence of pulmonary manifestations has not been well defined, but lung function tests are often altered even in the absence of respiratory symptoms. Several reviews describe latent pulmonary involvement in between 20% and 40% of patients with IBD,

identifying lymphocytosis in sputum or bronchoalveolar lavage, ventilation defects, bronchial hyperreactivity, and alterations in imaging tests in the absence of respiratory symptoms.^{7,8}

Airway involvement can occur anywhere from the upper airway to the small airways in the form of subglottic or tracheal stenosis, chronic bronchitis, bronchiectasis, or bronchiolitis obliterans. The most common manifestation is bronchiectasis, which typically presents with coughing and expectoration. Although high-resolution computed tomography (HRCT) provides higher diagnostic accuracy, most patients with bronchiectasis have a pathological chest X-ray.⁹ According to the European Crohn's and Colitis Organization (ECCO) guidelines, a chest X-ray is recommended as part of the study of latent tuberculosis in patients with IBD prior to starting immunomodulatory and/or biological treatment.¹⁰ Given that more than 50% of patients need these treatments at some point in the course of their disease, it could be said that most cases have been indirectly screened for IBD-related respiratory disease, and no further testing is required if patients are free of respiratory symptoms.

Pulmonary parenchymal involvement usually occurs concurrently with IBD activity and other EIMs.¹¹ The predominant symptom is dyspnea, and the most common entity is bronchiolitis obliterans with organizing pneumonia that usually presents with fever, generalized deterioration, and sometimes chest pain. It is often accompanied by single or multiple radiological opacities that are better characterized with HRCT than with standard X-ray. Diagnosis is confirmed by histopathological study, characterized by the presence of myxoid buds made up of fibroblasts and myofibroblasts with mucopolysaccharide-rich matrix and variable inflammatory component.¹²

Most patients with airway disease respond to inhaled corticosteroid therapy, while administration is systemic in the case of parenchymal involvement. In patients who are resistant to these treatments, immunomodulatory and/or biological therapies may be necessary.¹³

Concurrent asthma, though not considered a classic EIM, has been described in IBD patients. In a recent systematic review and meta-analysis that included 19 studies, the association of asthma with both Crohn's disease and ulcerative colitis was observed.¹⁴ According to the authors, this association arises because both IBD and asthma are immune-mediated diseases, in which both genetics

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and environmental factors play a significant role in their etiopathogenesis. However, knowledge in this area is still very scant, and it is reasonable to suppose that a field of collaborative research and development between the two specialties will emerge in the future.

The difficulty in diagnosing IBD-associated lung diseases is likely to be explained by their often indolent course and general absence at the time of onset of IBD.

In our opinion, additional testing with HRCT and bronchoscopy is unlikely to be of any real benefit in screening for lung disease in IBD patients who have no respiratory symptoms and no pathological findings on chest X-ray performed before starting immunosuppressive treatment. Conducting such examinations in these patients would expose them to radiation or the risk of complications associated with invasive tests in the absence of any clear evidence regarding the diagnostic yield or prognostic implications of the possible findings.

However, the high prevalence of lung manifestations and asthma reported in series of patients with IBD suggests that it would be advisable to adopt a proactive approach toward identifying individuals who would benefit from screening. To this end, we need to start by setting up specific collaborative groups involving both the respiratory and gastroenterology departments in order to establish and promote the development of protocols that will encourage the early diagnosis of lung diseases associated with IBD and, as such, improve the prognosis of these patients.

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