

Spectrum of non-inflammatory bowel disease and non-infectious colitis

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Received: October 28, 2008 **Revised:** November 21, 2008

Accepted: November 18, 2008

Published online: December 28, 2008

Abstract

A variety of inflammatory diseases of the colon, which can be differentiated from inflammatory bowel disease (IBD) and infectious colitis by their clinical, endoscopic and histological characteristics, are reported as non-IBD and non-infectious colitis. These diseases include microscopic colitis, ischemic colitis, segmental colitis associated with diverticula, radiation colitis, diversion colitis, eosinophilic colitis and Behcet's colitis. The etiopathogenesis of most of these diseases remains obscure and the epidemiological data are rather limited. These conditions are often troublesome for the patient and are associated with diagnostic difficulties for the physician. In many cases the treatment is empirical and there is a need for future research using randomized controlled trials.

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Key words: Diversion colitis; Ischemic colitis; Microscopic colitis; Radiation colitis; Segmental colitis

Peer reviewer: Elias A Kouroumalis, Professor, Department of Gastroenterology, Medical School, University of Crete, Heraklion, Crete, Greece

Koutroubakis IE. Spectrum of non-inflammatory bowel disease and non-infectious colitis. *World J Gastroenterol* 2008; 14(48): 7277-7279 Available from: URL: <http://www.wjgnet.com/1007-9327/14/7277.asp> DOI: <http://dx.doi.org/10.3748/wjg.14.7277>

This issue of *World Journal of Gastroenterology* contains a number of articles focusing on diagnosis and management of non-inflammatory bowel disease (IBD)

and non-infectious colitis. This term includes a variety of inflammatory diseases of the colon, which can be differentiated from IBD and infectious colitis by their clinical, endoscopic and histological characteristics^[1,2]. These diseases include microscopic colitides (collagenous and lymphocytic colitis), ischemic colitis, segmental colitis associated with diverticula (SCAD), radiation colitis, diversion colitis, eosinophilic colitis and Behcet's colitis. The etiopathogenesis of most of these diseases remains obscure. Clinical presentations include chronic, watery diarrhoea, abdominal pain and intermittent rectal bleeding. Constitutional symptoms are typically absent and laboratory data are often non-specific. Colonoscopic evaluation and mucosal biopsy are essential in establishing these diagnoses and to exclude IBD and infectious colitis. Prognosis and responses to treatment are variable. In general these conditions are often troublesome for both the patient and the physician. Most of these diseases are uncommon; therefore, epidemiologic data and data from controlled trials are not readily available.

Experts for these diseases were invited to write clinical guidelines for the diagnosis and management of the most common and more important of these diseases, although the scarcity of original data for the recently characterized forms of colitis make this task rather difficult.

Ischemic colitis is the most common form of gastrointestinal ischemia and accounts for 1 in 1000 hospitalizations. However, due to its mild and transient nature the incidence of IC is believed to be underestimated^[3]. Although frequent in the elderly, younger patients may also be affected. The first two articles^[4,5] deal with the diagnosis and management of ischemic colitis and the diagnostic approach of chronic GI ischemia.

Segmental colitis (or diverticular colitis) has been defined as the chronic mucosal inflammation associated with diverticular disease. This condition, which is usually called segmental colitis associated with diverticulosis (SCAD), is mainly characterized by the involvement of the sigmoid colon with sparing of the rectum and proximal colon. SCAD often mimics IBD at endoscopic and histological examination^[6]. Freeman^[7] has recently reviewed the clinical, pathogenetic and therapeutic features of this disease.

Collagenous colitis and lymphocytic colitis are the two major conditions that are characterized by chronic

watery diarrhoea, without endoscopic or radiological lesions, but with histological abnormalities and are therefore considered as “microscopic colitis”. Recent data suggests that the incidence of microscopic colitis is slightly less than the incidence of chronic idiopathic inflammatory bowel diseases (IBD)^[8,9]. In their review Tysk *et al*^[10] provide the current concepts on the diagnosis and management of microscopic colitis.

Radiation colitis has been known for years as an insidious and progressive iatrogenic disease that frequently develops 6 months to 5 years after regional radiotherapy for malignancy. Although improvements have been made in radiotherapy delivery, the incidence of radiation colitis is increasing. Kountouras *et al*^[11] present an extensive review on the recent advances in the management and prophylaxis of radiation colitis.

The articles cited in this review of non-IBD and non-infectious colitis hopefully serve to remind us that there are a variety of inflammatory diseases of the colon. The articles aid in early diagnosis of these diseases and provide us with current therapeutic options, as well as future prospects.

Other diseases that are rather rare and not included in these articles are diversion colitis, eosinophilic colitis and Behcet's colitis.

Diversion colitis is a non-specific colonic inflammation following surgical diversion of the fecal stream away from the colorectal mucosa. Such surgery may be necessary in cases of colon cancer, trauma or inflammatory diseases. Diversion colitis is characterized histopathologically by a chronic lymphoplasmacytic inflammatory infiltrate, and the existence of lymphoid follicular hyperplasia is considered to be a hallmark feature^[12]. The development of diversion colitis is attributed to a lack of short chain fatty acids (SCFA), normally produced from the breakdown of complex carbohydrates by resident bacteria. SCFA are the preferred energy substrate for colonocytes and are necessary for normal metabolism. Although most patients are asymptomatic, common symptoms are rectal bleeding, tenesmus and mucous discharge. It is observed in up to 91% of adults following diversion and it is usually mild or moderate but rarely severe (only in 4% of cases). The restoration of fecal continuity is the treatment of choice and is curative. However, prolonged diversion causes involution and atrophy of the segment leading to a poor functional outcome. Other possible treatment options are SCFA enemas (or 5-ASA enemas)^[13,14].

Eosinophilic colitis is an etiologically obscure and rare colonic inflammation which can be associated with involvement of other sections of the gastrointestinal tract from esophagus to rectum in a diffuse or segmentary manner. An infiltrate of eosinophilic granulocytes is found to varying degrees in all wall layers. Eosinophilic gastroenteritis may involve any part of the gastrointestinal tract, however colonic involvement is usually confined to the right colon. The common clinical symptoms are acute colicky pain, diarrhoea, rectal bleeding and weight loss. A history of food

intolerance or allergy is present in most of the patients and peripheral eosinophilia is present in 80% of cases. Colonoscopy is usually inconclusive but histology reveals an inflammatory infiltrate by eosinophils in the mucosal and submucosal layers. Treatment includes initially dietary manipulation and avoidance of specific foods, but in refractory cases, corticosteroids, immunosuppressants and sodium cromoglycate are effective although the published data on treatment of eosinophilic colitis are rather limited^[15,16].

Behcet's disease is a chronic inflammatory disease characterized by systemic manifestations such as recurrent oral and genital ulcerations, ocular and cutaneous lesions, arthritis and vascular disease. Gastrointestinal involvement is rare; its frequency has been reported to be 3%-25%, with geographical differences^[17]. Cases of Behcet's disease cluster along the ancient Silk Road, which extends from eastern Asia to the Mediterranean basin. In cases with ileocolonic involvement, it is often difficult to distinguish Behcet's disease from other inflammatory bowel diseases. Intestinal Behcet's disease commonly accompanies ulcerative lesions in the small and large bowel. The diagnosis of intestinal Behcet's disease, therefore, often depends on clinical manifestations of systemic Behcet's disease and intestinal ulcerative lesions. Treatment options include corticosteroids, azathioprine, or cyclosporine thalidomide and infliximab^[18,19].

In conclusion, there is a wide variety of rarer causes of colitis included in the term non-IBD non-infectious colitis. The etiopathogenesis of most of these diseases remains obscure and the epidemiological data are rather limited. In many cases the treatment is empirical and there is a need for future research using randomized controlled trials.

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S- Editor Li LF L- Editor Stewart GJ E- Editor Lin YP