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A Prospective Study of Extra Intestinal Manifestations in Ulcerative Colitis

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Abstract
Introduction: *Ulcerative colitis (UC) is an idiopathic, chronic-re-lapsing, progressive, inflammatory bowel disease. The inflammatory process is limited to mucosa. Ulcerative colitis affects the distal rectum and extends for varying distances proximally. Clinically, it manifests most often through diarrhea, blood and/or mucus in stools, tenesmus, abdominal pain and weight loss. The explicitness of intestinal symptomatology depends on the level of inflammatory process that is the activity of the disease.*
Materials and Methods: *We prospectively studied and recorded in a computer database 107 IBD out-patients consecutively in our Gastroenterology Unit, seen from 1 January 2017 to 31 December 2018. In all patients, diagnosis was established on the basis of usual clinical, endoscopic and histological criteria. Data regarding sex, age at diagnosis, clinical history, smoking habit, and presence of EIMs were analyzed in each patient.*
Results: *One hundred and seven IBD patients were enrolled in the study, 65 males (60%) and 42 females (46%). The UC-Group consisted of 64 (59%) patients, with a mean age at diagnosis of 33.2 ± 8.12 SD years. The CD-Group consisted of 43(41%) patients, with a mean age at diagnosis of 33.2 ± 8.12 SD years. The localization of disease in patients with CD was as follows: ileal in 18 patients, colic in 9, ileal-colic in 06, upper gastrointestinal tract in 10. Patients with UC showed the following localization of disease: proctitis in 21 cases, left-sided colitis in 29, diffuse colitis in 14. According to the Vienna Classification, 12 CD patients had inflammatory disease, 8 a stricturing course, 37 fistulizing disease and 11 only perianal involvement (Table 1).*
Conclusion: *Mucocutaneous manifestations, arthritis Type 1 and uveitis were significantly more frequent in CD than UC. The complications of the musculoskeletal system were the mostly observed ones, often with symptoms more severe than intestinal ones, confirming the need for close cooperation with rheumatologists. In conclusion, our data align with those emerging from the literature. Specifically, we found an increased association between EIMs (arthritis Type 1, uveitis and mucocutaneous ones) and CD. Undoubtedly, it is important to work closely with rheumatologists, since the musculoskeletal events are the most frequent. Often, these compromise the quality of life of patients much more than intestinal symptoms themselves.*
Key Words: *Ulcerative colitis, arthritis, uveitis.*

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I. Introduction

Ulcerative colitis (UC) is an idiopathic, chronic-re-lapsing, progressive, inflammatory bowel disease. The inflammatory process is limited to mucosa. Ulcerative colitis affects the distal rectum and extends for varying distances proximally. Clinically, it manifests most often through diarrhea, blood and/or mucus in stools, tenesmus, abdominal pain and weight loss. The explicitness of intestinal symptomatology depends on the level of inflammatory process that is the activity of the disease. By complementary analysis of clinical symptoms and signs, as well as laboratory parameters, it is possible to clinically grade UC activity as mild, moderate and severe. Activity assessment has therapeutic and prognostic significance (1,2).

In patients with UC, it is possible to develop extraintestinal manifestations (EM) which are the consequence of a pathological process in different extraintestinal structures. These structures are far from the bowel, and they differ from it in shape and function. According to their origin, extraintestinal manifestations can be classified into two groups. The first group consists of those manifestation which are the consequence of the basic bowel disease (iron-deficiency anemia, amyloidosis, hepatic steatosis and al.) or they are complications from the drugs used to treat UC (urticaria, osteoporosis and al.). They follow the clinical course of the basic bowel disease and react well to the therapy against UC. The second group most often consists of musculoskeletal, skin, ocular and hepatobiliary illnesses. The mechanism, which provokes the manifestations of the second group, is still not clear enough, as well as their relation to the existent bowel disease (2,3). The intriguing question is: is it the very same disease that attacks other organic structures besides the bowel, or is it

different, coincidental or perhaps "metastatic" form of UC (4). Das et al. think that these EM are the consequence of anautoimmune response to the same antigen (bacterial protein the so-called 40-kDa), localized in various structures (the chondrocyte of a joint, the ciliary body of the eye, the bile duct epithelial cell and al.) whose sub-stance is similar to tropomyosin or its isoforms on the surface of the colonic epithelial cell (5). One can find in the relevant literature much emphasis put on genetic factors for both UC and EM development. It is considered that the closest relatives of UC patients are at greater risk of getting the same bowel disease and developing the same EM type (5,6).

II. Materials And Methods

We retrospectively studied and recorded in a computer database 107 IBD out-patients consecutively in our Gastroenterology Unit, seen from 1 January 2017 to 31 December 2018.

In all patients, diagnosis was established on the basis of usual clinical, endoscopic and histological criteria.

Data regarding sex, age at diagnosis, clinical history, smoking habit, and presence of EIMs were analyzed in each patient.

EIMs were classified in 5 major groups: musculoskeletal (arthritis, ankylosing spondylitis); mucocutaneous (erythema nodosum, psoriasis, pyoderma gangrenosum, aphthous stomatitis); hepatobiliary (sclerosing cholangitis); ocular (uveitis) and metabolic (Hashimoto's thyroiditis).

Arthritis was further divided into: Type 1 (pauciarticular) arthropathy involving fewer than 5 joints, which is usually strongly correlated to exacerbations of bowel symptoms; Type 2 (polyarticular) arthropathy involving 5 or more joints with symptoms typically independent from the activity of IBD.

Statistical analysis

Fischer's Exact test (including Yates' correction) was used for categorical data. Probability values and confidence intervals (CI) were calculated at the 95% level. Differences were considered significant when $P \leq 0.05$ was reached.

III. Results

One hundred and seven IBD patients were enrolled in the study, 65 males (60%) and 42 females (46%). The UC-Group consisted of 64 (59%) patients, with a mean age at diagnosis of 33.2 ± 8.12 SD years. The CD-Group consisted of 43(41%) patients, with a mean age at diagnosis of 33.2 ± 8.12 SD years.

The localization of disease in patients with CD was as follows: ileal in 18 patients, colic in 9, ileal-colic in 06, upper gastrointestinal tract in 10. Patients with UC showed the following localization of disease: proctitis in 21 cases, left-sided colitis in 29, diffuse colitis in 14.

According to the Vienna Classification, 12 CD patients had inflammatory disease, 8 a stricturing course, 37 fistulizing disease and 11 only perianal involvement (Table 1).

S.No	Demographic characteristics	Crohn's disease N=43	Ulcerative Colitis N=64
1	Males/Females	23/20	42/22
2	Mean ± SD (Age years at diagnosis)	32.8±12.6	33.2±8.12
3	Location/Extension, n		
4	Ileum	18	-
5	Ileum + colon	06	-
6	Colon	9	-
7	Upper gastrointestinal	10	-
8	Diffuse Colitis	-	14
9	Left sided Colitis	-	29
10	Procto- sigmoiditis	-	21
11	Behaviour, n		
12	Inflammatory	12	-
13	Fistulizing	06	-
14	Stricturing	8	-
15	Perianl involvement	11	-
16	Smoke at diagnosis	10	16
17	Ex-Smoke at diagnosis	15	27
18	No-Smoke at diagnosis	18	22

Table 1: Demographic characteristics of inflammatory bowel disease patients

S.No	Type of EIMs	Percent IBD pts (40.2%)	Percent EIMs pts (100%)
1	Muscoloskeletal	26%	64.3%
2	Mucocutaneous	4%	12%
3	Ocular	3%	10%
4	Hepatobiliary	4%	4%
5	Endocrinological	3.2%	9.7%

Table 2: percentage of extraintestinal manifestations in IBD and in IBD with extraintestinal manifestations

Extraintestinal manifestations

EIMs were found in 42 (40.6%) patients (26 UC, 16 CD), with a prevalence of 35.3% and 55.1%, respectively, ($P < 0.0001$, OR = 0.44, 95%CI: 0.32-0.61).

Particularly, 37 (11.2%) EIMs (20 CD, 17 UC) were present at the onset of IBD (mean period 4.6 ± 3.1 SD, range: 1-24 years), 229 (69.6%) (40 CD, 59 UC) EIMs were observed after the diagnosis (mean period 10.4 ± 8.4 SD, range: 2-44 years) and 63 (19.2%) (27 CD, 36 UC) EIMs were present at the same time.

EIMs reported were: musculoskeletal in 42 cases (30 arthritis and 12 ankylosing spondylitis); mucocutaneous in 22 cases (16 erythema nodosum, 3 psoriasis, 1 pyoderma gangrenosum and 3 aphthous stomatitis); ocular in 15 cases (12 uveitis); hepatobiliary in 10 cases (sclerosing cholangitis) and endocrinological in 10 cases (Hashimoto's thyroiditis) (Table 2).

S.No	Type of EIMs	CD (40 pts)	UC (59 pts)
1	Muscoloskeletal	16	26
2	Mucocutaneous	8	14
3	Ocular	7	8
4	Hepatobiliary	2	8
5	Endocrinological	7	3

Table 3: Total extraintestinal manifestations in ulcerative colitis (59) and Crohn's disease (40) patients.

IV. Discussion

IBD are heterogeneous disorders often associated with involvement of extraintestinal organs and EIMs are frequently observed. Their clinical spectrum may vary from transitory mild forms to severe disabling complications, that in some instances may impair quality of life more than the intestinal disease itself.

EIMs may occur in up to 40% of IBD patients. In some series, but not in all, these are more common in CD than in UC[4,5]. Vavricka et al[5] have found EIMs in 43% of 580 CD and 31% of 370 UC patients. In our series, EIMs were found in 329 cases (40.6%) (119 CD, 210 UC) with a prevalence of 35.3% and 55.1% respectively, confirming previously published data.

Musculoskeletal manifestations are considered to be the most common EIMs with a reported prevalence in IBD patients ranging from 9% to 53%[6-8]. In our cohort of patients, musculoskeletal manifestations were recorded in 240 cases (29.6%), these being the main EIMs found (72.9%). The prevalence was significantly higher in UC than in CD.

In IBD, peripheral arthritis is usually divided into types 1 and 2[9-11]. Orchard et al[12] in a large retrospective study (976 UC, 483 CD) found type 1 and type 2 arthropathy, respectively, in 3.6% and in 2.5% of UC patients and in 6% and in 4% of CD cases.

In our series, arthritis was slightly more common in CD than in UC (CD 30.5% *vs* UC 27.1%). Arthritis Type 1 was significantly more frequent in CD (CD 19% *vs* UC 10.2%) while, on the contrary, the Type 2 form was significantly more present in UC (UC 16.8% *vs* CD 11.6%).

About 3%-12% of patients with IBD show ankylosing spondylitis and in those with human leukocyte antigen B27 (HLA-B27) positivity the development of this condition is almost the rule. Independent from gut disease is the axial involvement[3]. In our series, ankylosing spondylitis was observed in 5 CD and in 8 UC (CD 2.3% *vs* UC 1.3%).

V. Conclusion

Mucocutaneous manifestations, arthritis Type 1 and uveitis were significantly more frequent in CD than UC. The complications of the musculoskeletal system were the mostly observed ones, often with symptoms more severe than intestinal ones, confirming the need for close cooperation with rheumatologists. In conclusion, our data align with those emerging from the literature. Specifically, we found an increased association between EIMs (arthritis Type 1, uveitis and mucocutaneous ones) and CD. Undoubtedly, it is important to work closely with rheumatologists, since the musculoskeletal events are the most frequent. Often, these compromise the quality of life of patients much more than intestinal symptoms themselves.

References

[1]. Levine Joel B. Extraintestinal manifestations of inflammatorybowel diseases. In: Kirsner Joseph B (5th ed.), InflammatoryBowel Disease. W.B. Sounders Company, Philadelphia, 2000;397-409.
[2]. Bernstein CN, Blachard JF, Rawsthorne P, Yu N. The preva-lence of extraintestinal diseases in inflammatory bowel disease:a population based study. Am J Gastroenterology 2001; 96:1116-1122.
[3]. Raj V, Lichtenstein DR, Hepatobiliary manifestations of in-flammatory bowel diseases. Gastroenterology Clin North Am1999; 28: 491.
[4]. Riegler G, D'Inca R, Sturniolo GC, et al. Hepatobiliary altera-tion in patients with inflammatory bowel diseases. A multicen-ter study. Caprilli and Gruppo. Italiano studio ColonRecto.Scand of Gastroenterology 1998: 33-93.
[5]. Sandborn WJ. Pouchitis following ileal pouch-anal anastomosis:definition, pathogenesis and treatment. Gastroenterology 1994;107: 1856-1860.
[6]. Madelen MV, Farthing MJ, Nicholls RJ. Inflammation in the il-eal reservoar:"Pouchitis". Gut 1990; 31: 247-249.
[7]. Penna C, Dozois R, Tremaine W, Sandborn W, La Russo N,Schleck C, Illstrup D. Pouchitis after ileal pouch-anal anasto-mosis for ulcerative colitis occurs with icreased frequency inpatients with associated primary sclerosing cholangitis. Gut1996; 38: 234-239.
[8]. Inman RD. Arthritis and enteritis-an interface of protean mani-festations. J Reumatohology 1987; 14: 406-410.
[9]. Goudet P, Dozois RR, Kelly KA, Ilstrop DM, Phillips SF.Characteristics and evolution of EM associated with ulcerativecolitis after proctocolectomy. Dig Surg 2001; 18: 51-55.
[10]. Thomas PD, Keat AC, Forbes A, Ciclitira PJ, Nicholls RJ. Ex-traintestinal manifestations of ulcerative colitis following re-storative proctocolectomy. Eur J Gastroenterology Hepatology1999; 11: 997-999.
[11]. Orchard II TR Clinical phenotype is related to HLA genotypein the peripheral arthropathies of inflammatory bowel diseases.Gastroenterology 2000; 118: 274-278

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