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ORIGINAL ARTICLE

Profile of patients with Inflammatory Bowel Disease at the Gastroenterology Outpatient Clinic of the Federal University of Pelotas

Gabriela Breitenbach dos Santos¹, Daniela Muñoz Nogueira Zambrano², Elza Cristina Miranda da Cunha Bueno³, Luis Antonio Benvegnú⁴

1 Gastroenterologist Department of Medical Clinic/Residency Gastroenterology at the Federal University of Pelotas- UFPEL, Rua Elmar da Silva Costa 225, Bairro São Gonçalo, Pelotas - RS, Brazil;

2 Gastroenterologist, Department of Medical Clinic at the Federal University of Pelotas- UFPEL, Rua Elmar da Silva Costa 225, Bairro São Gonçalo, Pelotas - RS, Brazil;

3 Professor at the Regional University of the Northwest of the State of Rio Grande do Sul - UNIJUI, Rua do Comércio, 3000, Bairro Universitário, CEP 98700-000;

4 Gastroenterologist, Department of Medical Clinic at the Federal University of Pelotas- UFPEL Rua Elmar da Silva Costa 225, Bairro São Gonçalo, Pelotas - RS, Brazil.

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Correspondence to: Elza Cristina Miranda da Cunha Bueno, Gastroenterologist Department of Medical Clinic/Residency Gastroenterology at the Federal University of Pelotas- UFPEL, Rua Elmar da Silva Costa 225, Bairro São Gonçalo, Pelotas - RS, Brazil.
Email: ecmirandacunha@gmail.com

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ABSTRACT

AIM: To establish the profile of patients with inflammatory bowel disease treated at the Gastroenterology outpatient clinic of the

Teaching Hospital of the Federal University of Pelotas.

METHODS: Cross-sectional study in which patients were selected from a convenience sample. Patients treated at the outpatient clinic from January from 2018 to July 2019 were included. Data collection was performed through the review of medical records.

RESULTS: sixty-eight (68) patients were evaluated, 63% of whom were women, with an average age of 43 years. Fifty-six 56% of patients had Crohn's disease and 44% Ulcerative Rectocolitis. In Crohn's disease the most common involvement was ileocolonic (46%) and in Ulcerative Rectocolitis it was extensive colitis (56%). Crohn's disease patients were the ones who most hospitalized 64% and underwent surgical procedures 5.8 times more than Ulcerative Rectocolitis patients. An increased prevalence of psychiatric diseases was observed, affecting approximately one third of patients with Ulcerative Rectocolitis and around one fifth among patients with Crohn's Disease. In the treatment there was a predominance of the use of salicylates in Ulcerative Rectocolitis and immunosuppressants and immunobiologicals in Crohn's Disease.

CONCLUSION: The profile of patients with inflammatory bowel diseases at the outpatient clinic of Federal University of Pelotas is similar to that found in the literature.

Key words: Crohn's disease; Ulcerative colitis; Inflammatory Bowel Diseases, Outpatient clinic, Patient profiles

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INTRODUCTION

Inflammatory bowel disease (IBD) is represented by Crohn's disease (CD) and Ulcerative Retocolitis (UC). They occur from the interaction of genetic factors, alteration of the microbiota and increase in in-

testinal permeability, playing an important role in the poor regulation of intestinal immunity, which leads to gastrointestinal injury^[1]. UC affects the colon and rectum mucosa, while CD can occur anywhere in the digestive tract, from the mouth to the anus, but most often the ileal or ileocecal region, and attacks the entire intestinal wall (transmural) and generates a non-caseified granulomatous reaction^[1].

The incidence of CD in South America reaches an average of 1-3 per 100,000, rising to 3-4/100,000 in the most developed urban areas of Brazil^[2]. Although there is little epidemiological data from developing countries, the incidence and the prevalence of IBD are increasing worldwide, indicating its emergence as a global disease^[2,3].

CD and UC are intermittent chronic diseases and have a wide clinical picture, including abdominal pain, diarrhea, rectal bleeding, asthenia, weight loss, fever, anemia, and nutritional deficit^[1,2]. They can evolve with surgical abdomen (due to toxic megacolon, strictures, occlusion and intestinal perforation)^[4,5]. Thus, diagnosis is always a challenge for professionals, as well as treatment.

The Outpatient clinic of IBD of the Teaching Hospital of the Federal University of Pelotas (HE-UFPEL) is characterized as a tertiary-level outpatient clinic, being linked to the medical residency service of Gastroenterology and to the Faculty of Medicine of the Federal University of Pelotas (UFPEL). It offers service for the Unified Health System (SUS) and receives patients referred by the Basic Health Units of Pelotas and region and patients discharged from the HE-UFPEL.

A tertiary outpatient clinic needs to be attentive to complete and quality care for IBD patients as it is a teaching service with the aim of excellence. Therefore, the objective of this study was to know the profile of the patients seen at the Outpatient clinic of Inflammatory Bowel Diseases at the HE-UFPEL.

METHODS

This is a cross-sectional and retrospective study that evaluated CD and UC patients, treated at the HE-UFPEL from January 2018 to July 2019.

The medical records of patients in the HE-UFPEL were reviewed, where data were collected and later entered into an excel spreadsheet. Medical records were selected through a convenience sampling that included all patients seen on one day of the week (Wednesdays), during the study period, since care for IBD patients is concentrated in this day of the week.

The variables studied were: age, age at diagnosis, gender, whether the patient had UC or CD, affected intestinal segment, type of drug in use and combinations (glucocorticoids, aminosalicylates, immunosuppressants and immunobiologicals), date of diagnosis of the pathology, whether the patient performed or not gastrointestinal tract (GIT) surgery (in case the surgery was made, what was the type of surgery), whether he was being followed up with a nutritionist, whether he needed hospitalization, whether bone densitometry was performed, and which other comorbidities he had. The following aspects were evaluated: whether the patient was immunized for Hepatitis A and Hepatitis B and had been vaccinated for Pneumo 23. Patients with positive Anti HAV IgG were considered immune to Hepatitis A; for Hepatitis B with positive Anti-HBs and for Pneumo 23 if there was a record of vaccination in the medical record.

The collected data were analyzed for frequency and distribution. Trend and central distribution measures were calculated and percentages were calculated. For distribution analysis, tables were made and the statistical test used to test the differences in the quantitative variables was the X^2 and for the quantitative tests the

t test, both with a significance level of $p < 0.05$. The occurrence of surgeries was assessed in terms of prevalence and the difference between diseases measured by the Prevalence Ratio with a 95% Confidence Interval.

Ethical aspects

The ethical principles established by the National Health Council in Resolution N 196 of 10 October 1996 and subsequent modifications were respected.

Considering that the patients were not contacted and that the collected data will not identify the patient, the data collection was authorized by the Teaching and Research Management of the UFPEL School Hospital. This study was approved by the Ethics Committee (opinion number 3.593.560) of HE-UFPEL.

RESULTS

Sixty-eight medical records of IBD patients were analyzed; the diagnosis of CD was found in 38 patients, while the diagnosis of UC was identified in 30 patients. Most of the patients followed up were female, and the average age was 43.7 years, varying from 17 to 83 years, with standard deviation of 15.6. Most CD cases were concentrated in the age group of 17 to 40 years and UC cases in the age group of 40 years or more (Table 1). The average age at the date of the diagnosis of UC was 39 years and of CD was 32 years. The percentage of smokers was around 15%, with no significant differences between genders.

As for the anatomical extent of the inflammation of the UC, extensive colitis and left colitis were found to be the most common, being proctitis in the minority of patients (Table 2). CD patients were classified according to the Montreal Classification in terms of location and behavior. As for the location, ileocolonic involvement was observed as the most common involvement, followed by colonic involvement. Perianal involvement was found in about one third of the patients, which may be concomitant with one of the previous ones. As for behavior, it was observed that the most prevalent were penetrating and inflammatory (Table 2).

Regarding the surgical profile of patients, about 40% of them had undergone some procedure related to GIT, with 5.8 (95% CI 2.0-16.8) being more common among CD patients significantly higher in these patients. The most common procedure was appendectomy, followed by enterectomy, partial and total colectomy, placement of bridles and fistulectomy. There was no significant difference in relation to surgeries not related to GIT when comparing CD and UC patients (Table 3). As for hospital admissions, approximately 70% of patients had already had some hospitalization, and the majority of them were CD patients.

About 40% of the patients analyzed were undergoing nutritional monitoring. Bone densitometry was performed in only one fifth of the patients. Regarding the immunization of IBD patients, vaccines for Hepatitis A, Hepatitis B and Pneumo 23 were evaluated. It was observed that, around half of the patients, were immune to Hepatitis A, while for Hepatitis B and Pneumo 23, immune systems were around one third (Table 4).

The sum of the vaccination percentages may be less than 100% because data from patients who did not have a vaccination record in the medical record were excluded.

When studying comorbidities, an important frequency of psychiatric diseases (anxiety, depression, bipolar disorder or schizophrenia) was observed, affecting 30% of the UC patients and 18% of the CD patients. The diseases related to IBD due to

Table 1 Distribution of demographic variables according to diagnosis in patients treated at the Outpatient Clinic for Inflammatory Bowel Diseases.

Variable	Crohn Disease		UlcerativeRetocolitis		p
	n	%	n	%	
Diagnosis	38	55.9	30	44.1	-
Gender					
Male	18	47.4	7	23.3	0.04
Female	20	52.6	23	76.7	
Age					
< 30 years	12	31.6	4	13.3	0.07
30 a 39 years	10	26.3	5	16.7	
40 a 59 years	13	34.2	13	43.3	
60 years or more	3	7.9	8	26.7	
Diagnosis age					
Up to 20 years	3	10	7	18.4	0.52
21 to 30 years	6	20	11	28.9	
31 to 40 years	8	26.7	10	26.3	
41 to 50 years	7	23.3	4	10.5	
51 years or more	6	20	6	15.8	
Mean (sd)	32.9(13.3)		39.4(14.3)		0.06
Smoking					
Yes	6	15.9	4	13.3	0.77
No	32	84.2	26	86.7	

Table 2 Classification of Montreal for Crohn's disease and classification of Ulcerative Rectocolitis in terms of anatomical extension of the patients.

Variable	Crohn Disease		Ulcerative Rectocolitis	
	n	%	n	%
Montreal Classification				
Ileal	7	18.9	-	-
Colonic	13	35.1	-	-
Ileocolonic	17	45.9	-	-
Upper GIT *	0	0	-	-
Behavior				
Inflammatory	13	34.2	-	-
Stenosis	10	26.6	-	-
Penetrating	15	39.5	-	-
Perianal involvement	12	31.6	-	-
Classification				
Proctitis	-	-	4	13.3
Left colitis	-	-	9	30
Extensive colitis	-	-	17	56

* Gastrointestinal tract

Table 3 Occurrence of surgeries, according to the diagnosis, in the patients.

Surgery	No		Yes		PR (95% CI)	p
	n	%	n	%		
Some Surgery						
Ulcerative Colitis	19	63.3	11	36.7	2.2 (1.4-3.6)	<0.001
Crohn's disease	7	18.4	31	81.6		
Surgery not related to GIT *						
Ulcerative Rectocolitis	19	70.4	8	29.6	1.4 (0.6-3.4)	0.46
Crohn's disease	7	58.3	5	41.7		
Surgery related to GIT *						
Ulcerative Colitis	19	86.4	3	13.6	5.8 (2.0-16.8)	<0.001
Crohn's disease	7	21.2	26	78.8		

* Gastrointestinal tract, PR = Prevalence ratio, CI = Confidence interval.

Table 4 Distribution of variables regarding clinical follow-up routines.

Variable	Crohn Disease		Ulcerative Rectocolitis		p
	n	%	n	%	
Nutritional monitoring					
Yes	16	42.1	14	4	0.71
No	22	57.9	16	5	
Bone densitometry					
Yes	9	23.7	6	2	0.72
No	29	76.3	24	8	
Vaccination					
Hepatitis A					
Immune	17	44.7	13	43	0.98
Not immune	9	23.7	7		
Hepatitis B					
Immune	14	36.8	8	26	0.4
Not immune	15	39.5	14		
Pneumo 23					
Immunized	10	26.3	8	26	0.97
Not immunized	28	73.7	22		

Table 5 Distribution of the number and class of drugs in use by IBD patients treated according to the diagnosis.

Variable	Crohn Disease		Ulcerative Rectocolitis	
	n	%	n	%
Number of drugs in use				
0	1	2.6	2	6.7
1	16	42.1	7	23.3
2	13	34.2	8	26.7
3 or more	8	21	13	43.4
Class of drugs in use				
Glucocorticoids	14	36.8	6	20
Salicylates (topical and systemic)	8	21.1	25	83.3
Immunosuppressants	21	55.3	17	56.7
Immunobiologicals	19	50	7	23.3
Association of the immunobiological drug with the immunosuppressant	13/21	68.4	5/17	71.4

The sum of the percentages can be greater than 100% as there were patients who used more than one medication

its autoimmune component were: autoimmune hepatitis n = 1, psoriasis n = 2, gangrenous pyoderma n = 1, rheumatoid arthritis n = 1, enteropathic spondylitis n = 1, carpal tunnel syndrome n = 1, hypothyroidism n = 4, primary immunodeficiency n = 1.

Most patients were using two or more drugs for the treatment of IBD. It was observed that only 3 patients were not using any treatment due to poor adherence. The drugs were classified into 5 groups: a) glucocorticoids, b) topical salicylates (suppository), c) oral salicylates (sulfasalazine and mesalazine), d) immunosuppressants (azathioprine and methotrexate) and e) immunobiologicals (infliximab, adalimumab, vedolizumabe and ustequinumabe). In the UC, the use of systemic and topical salicylates was predominant, affecting more than 80% of patients and immunosuppressants in more than half. In CD, the most used were immunosuppressants and immunobiologicals followed by corticosteroids. It is also observed that 70% of CD patients who used immunosuppressants used concomitant immunobiologicals (Table 5).

DISCUSSION

This study showed a predominance of females in IBD as in other studies carried out in Brazil^[6,7,8,9]. The mean age found was 43.7 years with a standard deviation of 15.6, which is also similar to other national studies^[6,7]. As well as the mean age at diagnosis of UC (39 years)^[6,10].

Contrary to what was found in the literature, there was a predominance of CD^[7,9,10]. The most frequent locations of UC were extensive colitis and left colitis, with proctitis found in around one fifth of patients, which partially differs from the literature, since it shows a higher prevalence of proctitis^[6,8,10]. Bardhan *et al*^[10] demonstrated 44% of distal involvement. This difference can be justified by the fact that the service is a reference in inflammatory bowel diseases and, for this reason, receives more severe cases and difficult to manage, with patients with mild disease being seen in primary care services.

In the present study, it was observed that 14% of the patients at the IBD outpatient clinic were active smokers, a result similar to the study by Barros *et al*^[8] in Maceió, Alagoas. However, it is smaller when compared to a multicenter study carried out in the United Kingdom^[10]. Smoking exacerbates CD activity, accelerates recurrence and should be avoided^[5].

The Montreal classification is increasingly used to standardize the study of CD. In this study, the main location was ileocolonic followed by colonic and, later, ileal involvement. The high ileal impairment (if added ileal and ileocolonic) has also been demonstrated in studies in Brazil and other countries. Santos *et al*^[6], in service of a university polyclinic in Rio de Janeiro, found ileocolonic (58%) to be the most prevalent type, followed by colonic (18%) and ileal (11%). On the other hand, Kleinubing-junior *et al*^[7] in service at the Municipal Hospital of São José, in Joinville-SC, identified the ileocolonic location as the most prevalent. Souza *et al*^[9] observed ileal/ileoceleal involvement in 58% and ileocolonic involvement in 17% of patients. In a multicenter study carried out by Bardhan *et al*^[10], in the United Kingdom, CD was confined to the terminal ileum in about 24% and 22% of the patients had ileocolonic disease.

Perianal involvement in this study was found in 31% of CD patients, similar to the rate of Bechara *et al*^[11] which was 26%. As for the presentation of CD, there was a slight predominance of the penetrating character (39%), followed by inflammatory (34%) and stenosing (26%). In a study by Cleynen *et al*^[12], there was a predominance of non-penetrating/non-fistulizing inflammatory impairment, different from the present study, possibly because the behavior of the disease progresses over the years and many of the patients evaluated have been with the service for a longer time^[12,13].

In this study, only 3 patients were not using drugs due to poor adherence. Around a third of the patients were using monotherapy and the rest were using two or more drugs. This conduct is in line with the current guidelines for the management of most IBD patients and the high adherence to treatment found seems to demonstrate the quality of the service, which is expected from a tertiary level university service. Salicylate therapy was used in most UC patients, which is supported by the literature since its use is well established in the maintenance treatment of these patients^[3,14]. In the present study, most UC patients in treatment had extensive involvement and thus more severe treatment, therefore, it was recommended the associated use of other drugs, such as immunosuppressants (44%) and in some cases immunoglobulins (26%). The management of a patient with CD is complex; it must take into account the activity, location and behavior of the disease and should always be discussed with the

patient. In the outpatient clinic for inflammatory bowel diseases at HE-UFPEL, immunosuppressants and immunobiologicals are being used by about half of CD patients; these drugs have their indication well established in the remission and maintenance of the disease.^[5,13] The association of an immunobiological agent was performed in 70% of patients using immunosuppressants. This association shows synergism of these drugs, especially with anti-TNFs^[13]. The use of corticosteroids has also been observed, a drug that plays a more important role in the acute phase^[13].

Surgery was more frequent among CD patients than among those with UC. Predominance already reported in the literature.^[10] The study showed that surgeries related to GIT were almost six times more frequent in CD patients, while surgeries not related to GIT did not show any significant difference.

Most of the patients studied had already had some hospitalization. Patients with CD admitted more than those with UC, which is probably associated with greater complexity of the disease and surgeries. Since in CD, all segments of the gastrointestinal tract can be affected and the inflammation is transmural^[15]. Chronic intestinal inflammation can lead to the development of intestinal complications, such as strictures, fistulas and abscesses^[5].

In addition to clinical and eventually surgical management, complete management of the disease is necessary, which includes adequate nutrition and assessment of metabolic deficiencies. In UC and CD, malnutrition can be the result of reduced oral intake, increased nutritional needs and increased gastrointestinal loss of nutrients^[16,17]. Nutritional care is clearly important in the treatment of IBD patients and includes treatment of deficiencies of micronutrients and prevention of osteoporosis^[16,17]. In this study, about half of the patients were not being followed up with nutrition, despite the routine referral by the service, unfortunately there is still difficulty in accessing the SUS. The same difficulty is repeated with regard to access to bone densitometry, although it is routinely requested in the service, it was performed by only 22% of patients.

Among the most common comorbidities, the diagnosis of psychiatric diseases was observed in 30% of UC patients and in 18% of CD patients. This association is observed in other studies^[18,19,20]. Mood disorders are not only associated with the chronic character of the disease, but also with the brain-intestinal axis, a bidirectional communication system that integrates neuronal, hormonal and immune signals^[21]. For this reason, in the Outpatient clinic of IBD of HE-UFPEL there is psychological monitoring for patients.

Inflammatory bowel disease patients are immunocompromised; therefore, they are more susceptible to opportunistic diseases. Thus, vaccination against Hepatitis B is recommended in all seronegative patients^[22]. Likewise, patients using immunomodulators are considered at risk for pneumococcal infections. Pneumococcal vaccination should be offered before the start of immunomodulators^[22]. As for vaccination, they were immune to Hepatitis A, 44% of patients, to Hepatitis B, 32%. As for Pneumo 23, only 26% of patients were immunized. Thus, it was identified the need to improve vaccination coverage for patients, improve the service routine for requesting vaccines and when asked to evaluate, require proof of vaccination for scheduling returns, since the vaccine is offered free by SUS.

The analysis of health databases is fundamental for the investment and development of actions to improve services and, with that, the control of diseases. From the records and reliable data, it is possible to generate information for an adequate management and care decision making. This study had some limitations such as the small number of patients and for being a retrospective analysis. Therefore,

it is believed that the realization of this study will contribute to the HE-UFPEL Outpatient clinic of IBD to improve routines of the service and will be possible to offer more effective care to users.

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