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Incidence, prevalence, and epidemiological characteristics of inflammatory bowel diseases in the state of Paraná in Southern Brazil

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ABSTRACT – Background – The epidemiology of inflammatory bowel diseases (IBD) varies between different regions of Brazil. This cross-sectional study examined the epidemiological characteristics of IBD in the Southern Brazilian state of Paraná. **Methods –** We included patients with IBD (n=6.748) selected across 11,468,818 population of Paraná. All patients had a known diagnosis of either Crohn's disease (CD) or ulcerative colitis (UC) and had started treatment through the Government Program of the Brazilian Unified Health System (2010–2019). The primary outcomes were changes in the incidence and prevalence rates of IBD. **Results –** The study population consisted of 4.931 (73.1%) patients with UC and 1.817 (26.9%) patients with CD. In participants aged 11–30 years, CD was more common, while in participants aged 40–80 years, UC predominated. UC was more common in female compared to male patients, with a similar incidence between the sexes evident for CD. In 2010, the incidence of IBD was 2.00/100,00 population; this increased to 13.77/100,000 population by 2019. The highest concentration of IBD patients was found in the eastern macro-region of Paraná, which includes the 2nd Health Regional of Curitiba, where the capital of the state is located. **Conclusion –** This is the first study to describe the epidemiological characteristics of IBD in the state of Paraná and showed an increase in its incidence and prevalence. We also identified that IBD was concentrated in the eastern macro-region of this Brazilian state.

Keywords – Inflammatory bowel diseases; ulcerative colitis; Crohn's disease; incidence; prevalence.

INTRODUCTION

Inflammatory bowel diseases (IBD), ulcerative colitis (UC), and Crohn's disease (CD) affect people across the world, but their incidence varies depending on the geographical region. IBD are chronic and recurrent, predominantly occur in younger individuals, and have a negative effect on the general health and mental well-being of the patient[1,2]. The incidence and prevalence of IBD have increased more in countries with higher socio-economic development, especially in North-Western Europe, and also in those countries where a significant portion of the population have European ancestry, e.g., the United States of America, Australia, and New Zealand[3].

This increasing global prevalence in IBD seen since the end of the 20th century could be, in part, due to cultural changes in Southern and Eastern Europe, South America, and Asia. These changes include a more globalized diet, poor lifestyle habits, and changes in the intestinal microbiota composition. Poor hygienic and sanitary conditions may also be risk factors for IBD[3-6].

Despite this global trend, epidemiological data from Brazil are scarce, in particular data concerning the specific socio-demographic characteristics of loco-regional population groups[7-10] This study examined the epidemiological profile of IBD in Brazil, and is, to our knowledge, the first to do so in state of Paraná. The incidence and prevalence of UC and CD were also compared based on age, sex, duration of study assessment, and health macro-regions.

METHODS

A cross-sectional study was conducted that included epidemiological data from all patients who initiated treatment for IBD through the Government Program of the Brazilian Unified Health System, collected from the State Health Department for the period 2010–2019.

New cases were considered from the date on which the patient was first registered at a drug dispensing pharmacy of the Pharmaceutical Assistance Department in Paraná with a known diagnosis of CD [International Classification of Diseases (ICD) K50 or UC (ICD K51.0)], which meets the criteria established in the Clinical Protocols and Therapeutic Guidelines[11-13], published by the Ministry of Health (*Ministério da Saúde* – MS) and includes protocols for CD and UC.

The source population was the state of Paraná, which has the 15th largest territorial area (199,316,694 km^2), accounting for 2.3% total surface area of Brazil[14]. Paraná had approximately 11,468,818 million population in 2019, corresponding to 5.65% of the Brazilian population and 38.1% of the population of the South Region, with a population density of approximately 52.4 population/km^2 and an annual population growth rate of 0.9%[15]. Paraná ranks 5th among the most populous states in Brazil, behind São Paulo (45,919,049), Minas Gerais (21,168,791), Rio de Janeiro (17,264,943), and Bahia (14,873,064).

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Based on 2018 data, the state had a population growth of 0.75%, which was below the national average of 0.79%. The population forecast for 2020 is 11.5 million population, with a 0.74% growth rate from 2010 to 2020. This decrease, according to the Paraná Institute of Economic and Social Development (*Instituto Paranaense de Desenvolvimento Econômico e Social* – IPARDES)[16], likely results from a decreased fertility rate and the negative balance in inter-state migration.

In 2013, Paraná had a Gross Domestic Product of R$ 332.8 billion, ranking fourth among all states in terms of economy and accounting for 6.3% of the total wealth generated in the country in that year. The Human Development Index of the state is 0.820[16].

The state consists of 347 municipalities and is divided by the Paraná State Department of Health (*Secretaria de Estado da Saúde do Governo do Estado do Paraná*) into four macro-regions and 22 health regions. The 2nd metropolitan health region (Curitiba) consists of 29 municipalities with 3,223,836 population, accounting for 30.86% of the population of Paraná, i.e., the highest population of the state. Curitiba is considered the largest city in the Southern region of Brazil and is the 8th most populous city in the country overall, accounting for 40% of the Gross Domestic Product of the state.

The inclusion criteria were: patients residing in Paraná with IBD who were registered for treatment with pharmaceutical drugs such as salicylates and/or immunosuppressants and/or immunobiologicals between 2010 and 2019. We included patients irrespective of age or sex. We excluded patients with indeterminate colitis. In addition to diagnosis, we included data on age, sex, metropolitan health macro-regions, and medications used.

According to the organizational chart, the medication requests were made when the patient registered at one of the 22 regional offices or at one of the 347 municipalities of Paraná. This process is evaluated at the Paraná State Drug Center (*Centro de Medicamentos do Paraná* – CEMEPAR), located in Curitiba.

CEMEPAR is the logistics center of Paraná which is tasked with promoting population access to pharmaceutical drugs, immunobiologicals, and supplies offered by the Ministry of Health (*Ministério da Saúde* – MS) and by the State Department of Health (*Secretaria Estadual de Saúde* – SESA). Once permission is granted, the medication is distributed to local SESA units, from where it is dispensed, as well as to the pharmaceutical supply centers and pharmacies of the 22 health regions.

Information on age, sex, and region of residence of the patients registered for the medication, as well as the date of the first record of the patient were requested from the Pharmaceutical Assistance Department and from the CEMEPAR of the Paraná State Department of Health (*Secretaria de Estado da Saúde do Paraná*). The patients were identified with the number on the National Health Card (*Carteira Nacional de Saúde* – CNS) to ensure the confidentiality regarding the identity of those involved. Each patient was represented by a corresponding number. Their region of origin displayed by the Health Region, which covers the municipality of residence in question.

Data were extracted from the Computerized System for the Management and Monitoring of Exceptional Medicines (*Sistema Informatizado de Gerenciamento e Acompanhamento dos Medicamentos Excepcionais* – SISMEDEX). This is a computerized system used for dispensing medication from CEAF (*componente especializado da assistência farmacêutica*) in *farmácia do Paraná* [Paraná Pharmacy], which is parameterized with the Management System of the table of procedures, medication, orthotics, prostheses and special materials (*tabela de procedimentos, medicamentos, órteses, próteses e materiais especiais*) of the Unified Health System (*Sistema Único de Saúde* – SUS).

SISMEDEX is a specialized system for CEAF management and operation and is distributed in the 22 health regions of the Paraná State Department of Health (SESA/PR) and currently has more than 450 pharmacies. In addition to CEAF, SISMEDEX also manages and operates state programs and regulates the legal demand for pharmaceutical drugs. SISMEDEX was developed by the Paraná Information and Communication Technology Company (*Companhia de Tecnologia da Informação e Comunicação do Paraná* – CELEPAR), which is responsible for solutions development, the technological platform, as well as managing data storage and availability for the government.

To estimate the incidence and prevalence of IBD, all patients with CD or UC who initially registered for dispensing medication between January 2010 and December 2019 were included in the analysis.

In the descriptive analysis, measures of central tendency and dispersion are expressed as the mean and standard deviation for continuous variables that fit normal distribution assumptions, while non-normal data are described as the median and range. Categorical variables are expressed as absolute and relative frequencies. For all estimates, the 95% confidence intervals are also shown.

In the inferential analysis, the difference between continuous variables was estimated using Student's *t*-test, and the difference between categorical variables was estimated using a Pearson's chi-squared test with Yates correction[17,18].

In brief, prevalence measures the proportion of individuals who have the disease or medical condition at a given time. In this study, we described the prevalence of the individuals who already had the disease at the time of clinical presentation. The prevalence is, thus, the same as the cumulative incidence at that particular point in time[17].

Incidence was considered as the proportion of individuals who developed the disease or clinical condition in 1 year. This measure is usually estimated in cohort studies, with a follow-up period for people free of the disease. In cross-sectional studies, the incidence can be considered the number of individuals who develop the disease or clinical condition during that period[17].

Thus, the record of a patient in the system each year was considered a new case and computed to estimate the incidence.

Prevalence and incidence were calculated using the following formulas:

$$\text{Prevalence} = \frac{\text{Number of people with the disease at a given time}}{\text{Total number of people in the period}} \times 100{,}000$$

$$\text{Incidence} = \frac{\text{Number of new cases of the disease per year}}{\text{Total number of people at risk in the same period}} \times 100{,}000$$

The mean prevalences between 2010 and 2014 and between 2015 and 2019 were estimated considering the cumulative incidence in the period divided by 5 years.

$$\text{Estimate of the mean prevalence} = \frac{\text{Cumulative incidence in the period}}{\text{period (5years)}} \times 100{,}000$$

The annual incidence per 100,000 population was calculated considering the annual population of the state of Paraná, according to Department of Informatics of the Unified Health Syst em (*Departamento de Informática do Sistema Único de Saúde* – DATASUS) data[14].

The annual incidence per 100,000 population, based on the health macro-regions of Paraná, was also calculated considering population data available from DATASUS[14].

This study was approved by Ethics Committee on Human Research under registration number 33401214.5.0000.5411.

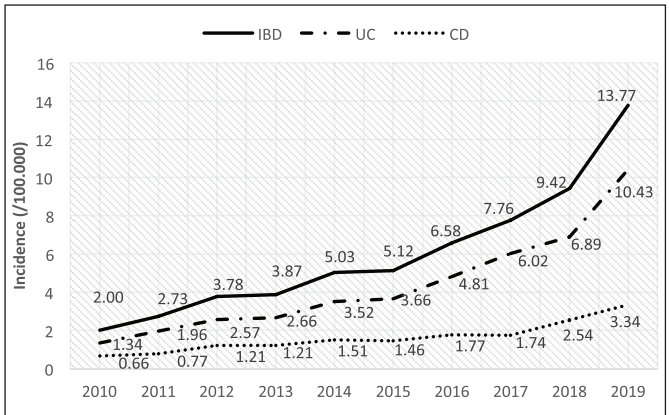
RESULTS

Study population and sample

The study population consisted of male and female patients with IBD (2–101 years of age) (n=6.748). This sample represented 0.059% of the state's total population, which is estimated at 11,468,818 population. In total, 4,931 (73.1%, IC95%=72.0–74.1) patients had UC and 1,817 (26.9%, IC95%=25.9–28.0) had CD.

Incidence and prevalence of inflammatory bowel disease

In 2010, the incidence of IBD was 2.00/100,000 population, which increased significantly to 13.77/100,000 population by 2019 (P<0.001). In 2014, the prevalence of IBD was 17.19/100,000 population, which had reached 58.88/100,000 population by 2019. The mean estimated prevalence of IBD was 8.92/100,000 population during the first 5 years of the study period and 38.32/100,000 population during its last 5 years (FIGURE 1).



Estimated prevalence /100,000	2010-2014	2015-2019
IBD	8.92	38.23
UC	6.16	27.50
CD	2.76	10.74

FIGURE1. Distribution of estimated incidence and prevalence (2010–2014 and 2015–2019) of inflammatory bowel diseases (IBD) per 100,000 population per year.

Pearson/yates qui-square test: P<0.001. Linear regression: IBD: y=-0.033+1.098x t UC: y=-0.286+0.849 x t CD: y=0.261+0.2472 x t.

Incidence and prevalence of ulcerative colitis and Crohn's disease

A significant increase in the incidence of UC and CD among all years of the study period was observed (P<0.001), except for 2012 and 2013, when the incidence of CD remained stable (P=0.99).

In 2010, the incidence of UC was 1.34/100,000, which had increased to 10.43/100,000 population by 2019. In 2014, the prevalence of UC was 11.90/100,000 population, which increased to 42.99/100,000 population by 2019, with a mean estimated prevalence of 6.16/100,000 population, during the first 5 years of the study period and 27.50 during its last 5 years.

In 2010, the incidence of CD was 0.66/100,000 population, which had increased to 3.34/100,000 population by 2019. In 2014, the prevalence of CD was 5.29/100,000 population, which had increased to 15.84/100,000 population by 2019, with a mean estimated prevalence of 2.76/100,000 population during the first 5 years of the study and 10.74/100,000 population during its last 5 years (FIGURE 1).

Inflammatory bowel disease according to age group

The median age of the patients with IBD was 45 years (IC95%=38–53), with a range of 2–101 years.

Considering the frequency distribution of IBD according to age group, we found a predominance of adults aged 21–70 years. For patients with UC, the median age was 47 years. CD was more commonly seen among younger patients (median of 40 years (range 3–93 years). In patients aged 11–30 years, the frequency of CD was higher than that of UC (P<0.001), while in patients aged 40–80 years, UC was predominant (P<0.001) (FIGURE 2).

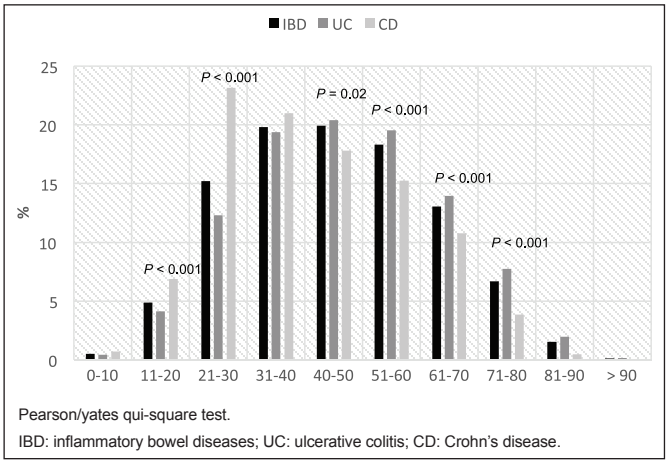


FIGURE 2. Frequency distribution of inflammatory bowel diseases according to age group.

Inflammatory bowel disease according to sex

In total, 3,975 female patients (58.9%, IC95%=57.7–60.0) and 2,773 male patients (41.1%, IC95%=39.0–42.3) with IBD were enrolled in the study, with a predominance of females in the UC group (P<0.001).

The female-to-male ratio was 1.4:1 for IBD in general, 1.56:1 for UC, and 1.13:1 for CD (P<0.01) (TABLE 1).

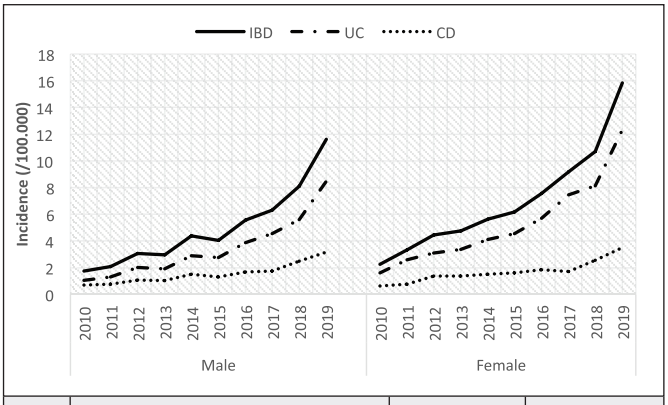
The incidence of IBD was always higher in females, with a rate of 15.85/100,000 population in 2019 (11.63/100,000 inhabitant males) (P<0.001). The prevalence of IBD in females in 2014 was 20.19/100,000 population; in 2019, it was 68.40/100,000 population, with a mean estimated prevalence of 10.54/100,000 population during the first 5 years of the study and 44.72/100,000 population during its last 5 years.

For males, the prevalence in 2014 was 14.13/100,000 population, and in 2019 it was 49.02/100,000 population, with a mean estimated prevalence of 7.27/100,000 population in the first 5 years and of 31.59/100,000 population during the last 5 years of the study period (FIGURE 3).

TABLE 1. Female-to-male ratio for ulcerative colitis and Crohn's disease.

Year	Ulcerative colitis	Crohn's disease	*P*
2010	1.57:1	0.91:1	0.09
2011	2.02:1	0.97:1	<0.001
2012	1.56:1	1.31:1	0.47
2013	1.79:1	1.33:1	0.20
2014	1.45:1	1.03:1	0.08
2015	1.69:1	1.26:1	0.14
2016	1.50:1	1.13:1	0.11
2017	1.68:1	1.0:1	<0.001
2018	1.49:1	1.0:1	0.01
2019	1.49:1	1.13:1	0.02

P: pearson/yates qui-square test.



	Estimated prevalence/100,000	2010–2014	2015–2019
IBD	Female	10.54	44.72
	Male	7.27	31.59
UC	Female	7.67	33.47
	Male	4.62	21.37
CD	Female	2.87	11.24
	Male	2.65	10.22

IBD: inflammatory bowel diseases; UC: ulcerative colitis; CD: Crohn's disease.

FIGURE 3. Distribution of estimated incidence and prevalence of inflammatory bowel diseases according to sex and year.

Crohn's disease and ulcerative colitis according to health macro-regions of Paraná

Considering the sum of the annual incidence values, according to macro-regions, in absolute numbers and percentage, a higher frequency of IBD was observed in the east macro-region (2,674 or 39.6%), where the state capital and metropolitan regions are located, with a significant urban population. The other macro-regions, geographically concentrated in the interior of the state, with a significant number of rural regions, had a lower frequency of IBD. In particular, the frequencies of IBD in the individual areas were: north (1,439; 21.4%), Northwest (1,426; 21.1%), and west (1,209; 17.9%) (FIGURE 4). The same was observed for UC, with 1,893 (38.4%) cases in the east macro-region. A higher frequency CD was also observed in the east macro-region (781 or 43.0%).

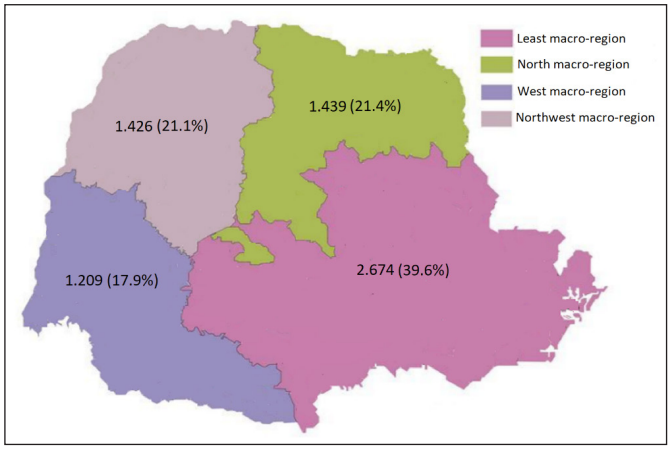


FIGURE 4. Absolute numbers and percentages of inflammatory bowel diseases cases according to health macro-regions of the state of Paraná.

DISCUSSION

This novel study describes the epidemiological profile of IBD patients residing in the Brazilian state of Paraná, located in the Southern part of the country. Our findings have the potential to contribute to the development of new public policies and health programs aimed at improving the quality of care provided to users of the Brazilian unified Health System.

In Paraná, 79% of the population comprises those of European (79%), African (14%), and Amerindian (11.5%) descent[19]. With a predominance of Caucasian individuals, Paraná has approximately 11,468,818 million population, which corresponds to 5.6% of the Brazilian population and 38.1% of the population of Southern Brazil. It is the 5th most populous Brazilian state and has the 4th largest economy in the country[19-21].

In this study, there was a sharp increase in the incidence of IBD in Paraná, from 2010 to 2019 with an estimated rate by linear regression about 1.1/100,000/year and 3 times higher for UC than for CD.

The data from this and previous studies that examined the epidemiology of IBD in Brazil are summarized in TABLE 2. These studies showed a remarkable increase in the estimated incidence and prevalence of IBD in Brazil, with a higher number of cases in more developed regions.

The current study was based on the new cases of patients with IBD registered at the Paraná State Health Department between 2010 and 2019, and the estimated prevalence over 10 years based on the cumulative incidence was 58.88/100,000 population. This was almost three times higher than that observed 15 years ago[7], i.e., 22.61/100,000 population in the State of São Paulo, and higher than that described in the State of Espírito Santo during 2014; both these states are located in Southeastern Brazil. In 2015, Gasparini et al.[10] reported an IBD prevalence of 52.6/100,000 population, similar to that found in this study 4 years later.

In a study conducted by Gasparini et al.[10] in 2018, the authors utilized data collected between 2012 and 2015. Similar results to ours were found but with a higher incidence and prevalence of IBD. These rates were already higher than those described in São Paulo 4 years ago, especially in the estimated prevalence for UC. These rates cause concern because the state of São Paulo is a region of greater industrialization and urbanization than Paraná, especially when considering only a few years of difference in the studies.

TABLE 2. Distribution of estimated prevalence and incidence of inflammatory bowel disease, ulcerative colitis, and Crohn's disease in Brazilian studies.

Authors	Year	State	Study period	IBD		UC		CD	
				Incid	Prev	Incid	Prev	Incid	Prev
Victoria et al.[7]	2009	São Paulo	1986–2005	9.73	22.61	4.48	14.81	3.50	5.65
Parente et al.[8]	2015	Piauí	2011–2012	1.53	12.8	–	–	–	–
Lima Martins et al.[9]	2018	Espírito Santo	2012–2014	7.7	38.2	5.3	24.1	2.4	14.1
Gasparini et al.[10]	2018	São Paulo	2012–2015	13.10	52.6	7.16	28.3	6.14	24.3
Renuzza et al.	2021	Paraná	2010–2019	13.77	58.84	10.43	42.99	3.34	15.84

Incid: incidence/100,000 population; Prev: prevalence/100,000 population; IBD: inflammatory bowel disease; UC: ulcerative colitis; CD: Crohn's disease.

In 2019, the incidence of UC in Paraná was 10.43/100,000 population, which was almost twice that observed by Victoria et al.[7] in 2005 in São Paulo (4.48/100,000 population) and Lima Martins et al.[9] in the state of Espírito Santo in 2014 (5.30/100,000 population). It was also slightly higher than that recorded by Gasparini et al.[10] in 2015 (7.16/100,000 population).

The incidence of CD in Paraná was 3.34/100,000 population in 2019; this rate is similar to that found in São Paulo in 2005 by Victoria et al.[7] (3.50/100,000 population), lower than that observed in the same state in 2015 by Gasparini et al.[10] (6.14/100,000 population). It was also higher than that observed in the state of Espírito Santo in 2014 by Lima Martins et al.[9] (2.40/100,000 population).

Quaresma, Kaplan, and Kotze[20] reported a large variation in the prevalence of IBD across different regions of Brazil. For example, the prevalence of IBD in the state of Piaui[8] (12.8/100,000 population) was significantly lower than that described for São Paulo by Gasparini et al.[10] (52.6/100,000 population) and in Paraná, as described in our sample (58.84/100,000 population). Social, economic, and cultural factors possibly influence the prevalence of IBD, which is higher in more developed states of the country (i.e., São Paulo and Paraná) when compared to states with a lower index of economic development (e.g., Piauí)[8].

When compared to other Latin American and Caribbean countries, the incidence of UC in Paraná was higher than that found in Puerto Rico (5.78/100,000 population) in 2004, Guadeloupe and Martinique (2.44/100,000 population) in 1997–1999, and Barbados (1.58/100,000 population) in 2000–2004[6].

In 2019, the IBD incidence rates for Paraná were comparable to those observed in Europe in 1991–1993 (11.8/100,000 population), North America in 1989–1994 (14.3/100,000 population), Scandinavia in 1990–1994 (16.5/100,000 population), and the United Kingdom in 1985–1994 (13.9/100,000 population)[21].

Thus, in Brazil and Latin America, the incidence rate of IBD is still low compared to other regions of the world. However, a progressive increase has been recorded, possibly secondary to the Westernization of the cultures and societies of these regions[6,22].

Even with the low prevalence of IBD recorded in Brazilian studies, e.g., those of Gasparin et al.[10], Victoria et al.[7], Lima Martins et al.[9], Parente et al.[8], as well as our own, the similar progression of IBD incidence rates compared to those in North America and Europe suggest that the prevalence data may equalize over time, considering the trend of stabilization or even reduction of IBD incidence in developed countries, as demonstrated in the systematic review conducted by Ng et al.[3].

In this study, the median age of patients with IBD was 45 years, which is similar to that reported by Gasparin et al.[10]. In a more detailed analysis, we found that the frequency of CD was higher than that of UC in patients aged 11–30 years. In contrast, UC predominated in patients aged 40–80 years. This is in agreement with the findings of Gasparini et al.[10], who showed a tendency towards UC in older patients.

In terms of the sex distribution of IBD, we found a higher prevalence among females compared to that among male, which is in line with the results of several previous studies, such as the one carried out by Souza in 2002[7,10,23-25]. However, across all the individual years observed during the study period (2010–2019), we found similar incidence rates for IBD between male and female patients.

Considering the geographical division of Paraná, the eastern macro-region, where the state capital of Paraná is located, falls under the 2nd Health Regional of Curitiba. It is the largest health region, one that is industrially developed, with predominantly urban characteristics, and the most cases of IBD. The frequency of IBD is lower in the Northern and Northwestern macro-regions of Paraná, which are based around agricultural economies. These findings indicate that, as suggested by Burish et al.[26], factors associated with an urban lifestyle influence the risk of developing IBD, but without determining whether the relationship occurs due to the environment itself or is associated with an individual genetic predisposition to the disease.

Data from patients seen in private healthcare were not included in this study, which may lead to overestimation or underestimation of the true incidence and prevalence rates of IBD. Although only patients seen in the public health system were included, it is believed that this limitation has little impact on our results, since, considering the high cost of treatment, the socio-economic profile of the population, and the chronic evolution of the disease, certainly the vast majority of IBD patients obtain their medications free of charge from the Medication Dispensing Public System of the Health Department of the State of Paraná.

CONCLUSION

In summary, based on the study design and method applied, there was an increase in the incidence and prevalence rates of IBD in Paraná between 2010 and 2019, with a more marked increase in the rates of UC and CD from 2015 to 2019.

We found a predominance of IBD in adult aged 21 to 70 years, with a median age of 47 years for UC and CD seen among younger patients (median age of 40 years).

There was a higher frequency of UC in females compared to that in males, and there was similar sex distribution for CD.

The concentration of IBD was highest in the most urbanized region of the state, where the 2nd Health Regional of Curitiba, the state capital, is located.

Despite evidence showing an increased incidence and prevalence of IBD, Brazilian epidemiological studies are few, and this is the first one carried out in the state of Paraná.

In conclusion, to better understand the disease and epidemiological profiles of IBD, efforts must be made to innovate current health services and create a unified national registry system to identify possible risk factors involved in different regions of the country, to establish health policy goals and actions to prevent IBD morbidity and mortality in Brazil.

Authors' contribution

Renuzza SSS: study design, research execution, data collection, interpretation of results, literature review, and article writing; Vieira ER: data collection and interpretation of results; Cornel CA: study design and interpretation of results; Lima MN: statistical analysis, interpretation of results, and article writing; Ramos Junior O: study design, research supervision, interpretation of results, and article writing and review.

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Renuzza SSS, Vieira ER, Cornel CA, Lima MN, Ramos Junior O. Incidência, prevalência e características epidemiológicas das doenças inflamatórias intestinais no estado do Paraná no sul do Brasil. Arq Gastroenterol. 2022;59(3):327-33.

RESUMO – **Contexto –** A epidemiologia das doenças inflamatórias intestinais (DII) varia em diferentes regiões do Brasil. Este estudo transversal avaliou as características epidemiológicas da DII no estado do Paraná no sul do Brasil. **Métodos –** Foram incluídos pacientes com DII (n=6,748) selecionados de 11.468.818 habitantes no estado do Paraná. Todos os pacientes eram portadores de doença de Crohn (DC) ou retocolite ulcerativa (RCU) e iniciaram seu tratamento por meio do Sistema Público de Dispensação de Medicamentos da Secretaria de Saúde do Estado do Paraná (2010–2019). Os desfechos primários foram as alterações na incidência e prevalência de DII. **Resultados –** A população de estudo foi constituída de 4.931 pacientes (73,1%) portadores de RCU e 1.817 (26,9%) de DC. Nos pacientes com 11 a 30 anos a DC foi mais comum, enquanto naqueles com 40–80 anos a RCU predominou. Retocolite ulcerativa foi mais frequente no sexo feminino, com frequência semelhante entre os sexos para DC. A incidência de DII passou de 2,00/100.000 habitantes em 2010 para 13,77/100.000 habitantes em 2019. A maior incidência da DII foi observada na macrorregional leste, que inclui a 2ª Regional Curitiba, onde a capital do estado está localizada. **Conclusão –** Este é o primeiro estudo com a descrição das características epidemiológicas do Paraná e mostrou aumento na incidência e prevalência da DII no estado. Foi também identificada maior concentração da DII na macrorregional leste deste estado brasileiro.

Palavras-chave – Doença inflamatória intestinal; retocolite ulcerativa; doença de Crohn; incidência; prevalência.

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