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CLINICAL AND EPIDEMIOLOGICAL PROFILE OF HEPATITIS B AND C PATIENTS IN A MUNICIPALITY IN SOUTHERN BRAZIL

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ABSTRACT

Context: Hepatitis B and C are common diseases with significant public health impacts. Hepatitis B is primarily transmitted through sexual contact, classifying it as a sexually transmitted infection, while hepatitis C is mainly transmitted through blood. Without early and proper treatment, these infections can lead to complications such as hepatocellular carcinoma and liver cirrhosis. Objective: To determine the clinical-epidemiological profile of hepatitis B and C patients treated at a specialized health center in a municipality in southern Santa Catarina from 2016 to 2020. Methods: A retrospective observational study with a cross-sectional design. The analysis included 123 patients with hepatitis B and/or C who received care at the Specialized Health Care Center (CAES) in Tubarão, SC, between 2016 and 2020. Results: Hepatitis C was the most prevalent, accounting for 79.7% of cases, with males being the most affected in both infections. The chronic form was observed in 92% of hepatitis B cases and 92.9% of hepatitis C cases. Only a minority of patients had complete vaccination against HBV. Conclusion: A detailed understanding of the behavior of hepatitis B and C and the affected population helps identify at-risk patients, contributing to early diagnosis and treatment, and reducing disease complications.

Keywords: Viral Hepatitis, Prevalence, Hepatology, Health Profile.

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INTRODUCTION

Viral hepatitis is a commonly encountered condition with a significant impact on public health, particularly in relation to morbidity and mortality. It is known that both hepatitis B and hepatitis C have acute and chronic forms, which can be symptomatic or asymptomatic. However, when diagnosed late or treated incorrectly, they can lead to complications such as liver cirrhosis and hepatocellular carcinoma (1).

Hepatitis B is characterized as a liver infection, also classified as a sexually transmitted infection (STI), caused by the hepatitis B virus (HBV), which is a DNA virus from the Hepadnaviridae family (2,3,4). Its transmission can occur in various ways, with sexual transmission being the most predominant. Hepatitis C, on the other hand, is caused by the hepatitis C virus (HCV), classified as an RNA virus from the Flaviviridae family (4). Its transmission occurs mainly through blood, via contact with contaminated blood through breaches in the skin or invasive procedures, or through contact with contaminated materials (5,6).

Between 1999 and 2019, 673,389 cases of viral hepatitis were reported in the Notifiable Diseases Information System (Sistema de Informação de Agravos de Notificação - SINAN) in Brazil, of which 247,890 (36.8%) were related to hepatitis B and 253,307 (37.6%) to hepatitis C (7). Regarding coinfection with HIV from 2007 to 2019, an association was observed in 5.1% of HBV cases and in 8.8% of HCV cases. When analyzing mortality data, the Mortality Information System (Sistema de Informação de Mortalidade - SIM) identified that among the leading causes of death from viral hepatitis, type C was the primary cause, followed by type B. Coinfection with HIV was observed in 5.1% and 8.8% of hepatitis B and C cases, respectively, during the period from 2007 to 2019 (7).

Currently, a vaccine for hepatitis B is available, offering 98 to 100% protection and is part of the National Immunization Program (2,8). Previous studies show that pharmacological measures for chronic hepatitis B are effective in reducing viral levels; however, it is known that the ideal outcome, characterized by sustained loss of HBsAg with or without seroconversion to Anti-HBs, rarely occurs (8,9).

According to the 2017 Clinical Protocol and Therapeutic Guidelines for Hepatitis B and Coinfections (Protocolo Clínico e Diretrizes de Terapêuticas para Hepatite B e Coinfecções - PCDT), the basic inclusion criteria for the treatment of hepatitis B without the Delta agent are: patients with reactive HBeAg and ALT levels greater than twice the upper limit of normal (ULN), adult patients over 30 years old with reactive HBeAg, and patients with non-reactive HBeAg with HBV-DNA greater than 2,000 IU/mL and ALT levels twice the ULN (8).

Therapeutic strategies for hepatitis C aim to cure the infection, as the drugs used have a 95% efficacy in achieving sustained virological response (5,10,11). According to the 2019 PCDT,

treatment for hepatitis C should be initiated in the presence of acute or chronic HCV infection, and the choice of medication is based, among other factors, on the identification of the HCV genotype (11). Unfortunately, there is no available vaccine for hepatitis C, so the best prevention is to avoid contact with HCV (5,6,12).

Therefore, this study aimed to evaluate the clinical and epidemiological aspects of patients with hepatitis B and C treated at a Specialized Health Care Center in a municipality in southern Santa Catarina during the period from 2016 to 2020.

METHODS

This is an observational epidemiological study with a cross-sectional design using secondary data from patient records during the period from 2016 to 2020. The study included individuals aged 18 and older with hepatitis B and C, residents of a municipality in southern Santa Catarina, who were treated at a Specialized Health Care Center. Twenty patients with only hepatitis B or C were excluded from the study due to the lack of epidemiological investigation records, one patient was excluded for not having detectable viral load at the time of notification, and two other patients were excluded for not having medical records at the data collection site. Additionally, 61 HIV-coinfected patients treated at the health institution were excluded from the study: for 24, the notification forms were not found, 35 were outside the analyzed period, one patient did not have a detectable HCV viral load at the time of notification, and one was excluded for not having a viral load test at the time of notification.

Regarding the outcome variable, four possibilities were listed: discontinuation of follow-up, and viral load being undetectable, detectable, or below the limit of quantification according to the last test. Discontinuation of follow-up for hepatitis B was considered for those patients who did not undergo a new viral load test after one year from the last test, according to the Clinical Protocol and Therapeutic Guidelines (PCDT) (3). This document recommends repeating the viral load test within six months for inactive patients and within 12 months for others. However, as some individuals did not have enough tests to confirm whether they were inactive carriers or not, the 12-month criterion was applied to all patients (3).

For hepatitis C, the criterion for discontinuation of follow-up was applied to patients who did not return for consultation after the prescribed treatment during the study period and those who did not return after the first consultation or notification.

Patients with detectable HBV viral load also include those who only attended one consultation but were still within the 12-month follow-up period.

Regarding the variable that analyzed the AST (Aspartate Aminotransferase) and ALT (Alanine Aminotransferase) levels closest to the notification date, the following values were

considered: normal (AST up to 32 U/L in women and 40 U/L in men, and ALT up to 33 U/L in women and 41 U/L in men), up to twice the upper limit of normal, and more than twice the upper limit of normal (8,11,13). When analyzing the age variable, the ages of the individuals on the notification date were used.

The data were entered and tabulated using Microsoft Office Excel 2007, and the statistical analysis was performed with the aid of SPSS software (for Windows v Chicago, IL, USA). To assess the association between the variables of interest, Pearson's chi-square test or Fisher's exact test was used, as appropriate, for categorical variables, and Student's t-test was used to compare means. Additionally, the Shapiro-Wilk test was applied to assess normality. The level of statistical significance adopted was 5% (p-value < 0.05).

The study was approved by the Research Ethics Committee of the University of Southern Santa Catarina (Comitê de Ética em Pesquisa - CEP) on September 15, 2021, under opinion number 4.975.724 and follows the guidelines of resolution 466/2012 of the National Health Council.

RESULTS

A total of 123 patients with hepatitis B or C were evaluated at the specialized health care center during the period from 2016 to 2020. Of these, 25 (20.3%) were infected with HBV and 98 (79.7%) with HCV. The most affected ethnicity was self-declared white patients, with the average age of those infected with HBV being 42 years, and 53.2 years for those infected with HCV. Only 5 women (4%) were pregnant at the time of notification, and for both hepatitis B and C, the most frequently reported area of residence was urban. Most of the individuals had incomplete elementary education, and the majority did not qualify as public servants.

Regarding clinical characteristics, the chronic form was found in 23 (92%) of the patients with hepatitis B and in 91 (92.9%) of those with hepatitis C. The complete vaccination schedule for hepatitis B was found in a minority of the individuals studied, with only 5 (5.1%) people having HIV and HCV coinfection. Only 3 (12%) of those with HBV and 10 (10.2%) with HCV were institutionalized at the time of notification. Table 1 provides a detailed view of the clinical and epidemiological profile distribution of the patients under study.

Table 1 – Clinical and epidemiological profile of patients with hepatitis B and C treated at a Specialized Health Center in Southern Santa Catarina from 2016 to 2020.

		Hepatitis B		Hepatitis C	
Variable		N	%	N	%
Sex					
	Feminine	9	36	31	31,6
	Masculine	16	64	67	68,4
Ethnicity					
	White	15	60	83	84,7
	Black	8	32	9	9,2
	Asian	-	-	1	1

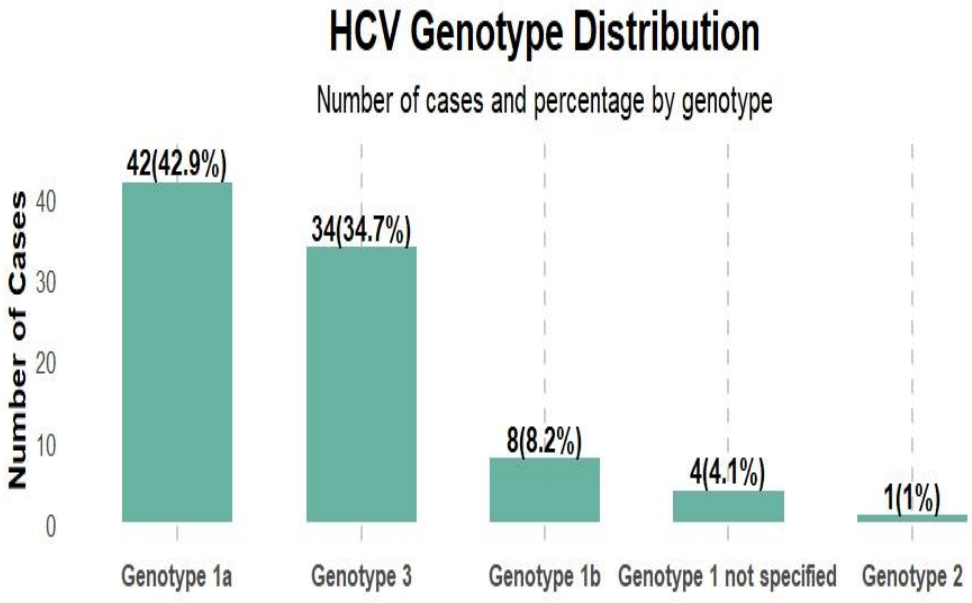
	Mixed-race	1	4	3	3,1
Area of residence					
	Urban	18	72	68	69,4
	Rural	1	4	8	8,2
Education					
	Illiterate	-	-	4	4,1
	Incomplete E.E.	11	44	38	38,8
	Complete E.E.	-	-	10	10,2
	Incomplete H.S.	3	12	8	8,2
	Complete H.S.	8	32	21	21,4
	Incomplete H.E.	-	-	4	4,1
	Complete H.E.	3	12	2	2
Occupation					
	Public servant	-	-	1	1
	Non-public servant	19	76	51	52
	Unemployed	2	8	20	20,4
	Retired	3	12	20	20,4
Clinical form					
	Chronic	23	92	91	92,9
	Fulminant	-	-	1	1
HIV coinfection					
	Yes	-	-	4	5,1
	No	25	100	92	93,9
HBV Vaccine					
	Complete	3	12	9	9,2
	Incomplete	2	8	15	15,3
	Not vaccinated	14	56	67	68,4
Institutionalized					
	No	15	60	56	57,1
	Hospital/Clinic	2	8	4	4,1
	Prison	-	-	2	2
	Others	1	4	4	4,1
Pregnant					
	1st trimester	3	12	-	-
	2nd trimester	-	-	1	1
	3rd trimester	1	4	-	-

Legend: E.E: elementary education; H.S.: high school; H.E: higher education.

Regarding the complications of viral hepatitis in patients with HCV, 7 (7.1%) had isolated liver cirrhosis, and only 1 (1%) individual had both hepatocellular carcinoma and cirrhosis concurrently. Among those infected with HBV, only 1 (4%) individual had isolated liver cirrhosis. When analyzing the cited complications in relation to sex, it was observed that cirrhosis was present in 3 (7.5%) women and 5 (6%) men, with a p-value of 0.756. The only case of cirrhosis concomitant with hepatocellular carcinoma was in 1 (1.2%) man, with a p-value of 0.486.

The HCV genotype was requested for 89 (90.9%) individuals, with a predominance of genotype 1a, followed by genotype 3. When observing the most prevalent genotypes in the study in relation to sex, it was found that genotype 1a was present in 13 (32.5%) women and 29 (34.9%) men, with a p-value of 0.789, and genotype 3, the second most prevalent, was observed in 14 (35%) women and 20 (24.1%) men, with a p-value of 0.205. The distribution of data according to HCV viral genotype can be seen in Figure 1.

Figure 1 – HCV Genotypes of hepatitis C patients treated at a Specialized Health Center in Southern Santa Catarina from 2016 to 2020.



When viral infection markers were analyzed, it was observed that there was no concomitant infection between the studied hepatitis types. Among hepatitis C patients, 98 (100%) individuals presented reactive HCV serology at the time of notification. For some patients with this subtype of infection, HBV infection markers were requested, as shown in Table 2. For hepatitis B patients, HBsAg was requested for all 25 (100%) individuals, with all results being reactive. However, the rest of the markers for this infection were not requested for all patients. Anti-HCV was requested for 16 HBV patients, with 2 (8%) of them showing reactive results. The detailed data can be seen in Table 2.

Table 2 – Evaluation of viral markers, transaminases, prior exposures, and probable source of infection in hepatitis B and C patients treated at a Specialized Health Center in Southern Santa Catarina from 2016 to 2020.

		Hepatitis B		Hepatitis C	
Variable		N	%	N	%
HBsAg					
	Reactive	25	100	-	-
	Non reactive	-	-	64	65,3
HBc IgM					
	Reactive	1	4	-	-
	Non reactive	13	52	6	6,1
HBc total					
	Reactive	14	56	7	7,1
	Non reactive	-	-	17	17,3
HBeAg					
	Reactive	2	8	-	-
	Non reactive	17	68	1	1
AntiHBe					
	Reactive	12	48	-	-
	Non reactive	7	28	-	-
AntiHBs					
	Reactive	-	-	4	4,1
	Non reactive	12	48	16	16,3
antiHCV					

	Reactive	2	8	98	100
	Non reactive	14	56	-	-
TGP/ALT					
	Normal	13	52	39	39,8
	Up 2 times ULN	7	28	21	21,4
	More than 2 times ULN	3	12	22	22,4
TGO/AST					
	Normal	18	72	44	44,9
	Up 2 times ULN	4	16	22	22,4
	More than 2 times ULN	1	4	17	17,3
Previous exposure					
	Injectable medications	17	68	74	75,5
	Inhalable drugs	-	-	49	50
	Injectable drugs	-	-	19	19,4
	3 or more sexual partners	13	52	69	70,4
	Transplant	-	-	2	2
	Tattoo/piercing	4	16	24	24,5
	Acupuncture	2	8,3	6	6,1
	Surgical treatment	13	52	66	67,3
	Dental treatment	20	80	87	88,8
	Hemodialysis	-	-	2	2
	Accident with Blood transfusion	-	-	1	1
	2		8	25	25
Probable source					
	Sexual	6	24	16	16,3
	Transfusional	-	-	7	7,1
	Drug use	-	-	28	28,6
	Hemodialysis	-	-	1	1
	Surgical procedure		-	2	2
	Dental procedure	1	4	2	2

Legend: ULN: upper limit of normal

Regarding the transaminases requested at the time of notification, or close to it, it was observed that AST was requested for 83 (84.6%) of HCV carriers and for 23 (92%) individuals infected with HBV. ALT, for hepatitis C patients, was requested for 82 (83.6%) patients and for 23 (92%) in individuals with hepatitis B.

In the category of previous exposure, 23 (92%) of hepatitis B carriers and 94 (95.9%) of hepatitis C patients reported some type of exposure, with the most prevalent exposures in both types of hepatitis being dental treatment, the use of injectable medications, multiple sexual partners, and surgical procedures. The most cited probable sources were sexual transmission for hepatitis B and drug use for hepatitis C. The probable sources and exposures mentioned are detailed in Table 2.

As there were no cases of acute hepatitis B, no patient required immunoglobulin for hepatitis B. Among the carriers of this viral hepatitis, only 1 (4%) used medication, with entecavir being the drug of choice. Regarding individuals with hepatitis C, medication treatment was prescribed for 75 (76.5%) patients, and the therapeutic regimen for this infection involves two to three medications.

Four possible outcomes were observed for the study participants. Among those with hepatitis C, 57 (58.2%) individuals had an undetectable viral load by the end of data collection, 4 (4.1%) had a viral load below the limit of quantification, and 37 (37.8%) discontinued follow-up at the study site. For those infected with HBV, 9 (36%) patients had a detectable viral load during the data collection period, only 1 (4%) had a viral load below the limit of quantification, and 15 (60%) discontinued follow-up at the service studied.

Table 4 examined the relationship between the four possible outcomes by variables such as sex, age group, and HCV genotype. It is possible to observe a higher number of follow-up dropouts among male patients, and the age group with the most dropouts was 18 to 39 years.

Table 4 – Relationship between outcomes by sex, age group, and HCV genotype in hepatitis C patients treated at a Specialized Health Center in Southern Santa Catarina from 2016 to 2020.

	Undetectable VL		Detectable VL		Viral load below quantification		Discontinued follow-up		P
	N	%	N	%	N	%	N	%	
Sex									
Feminine	21	52,5	4	10	2	5	13	32,5	0,469
Masculine	36	43,4	5	6	3	3,6	39	47	0,469
Age group									
18-39 years	5	20,8	7	29,2	-	-	12	50	0,000
40-59 years	35	51,5	-	-	4	5,9	29	42,6	
> 60 years	17	54,8	2	6,5	1	3,2	11	35,5	
HCV Genotype									
1a	31	73,8	-	-	1	2,4	10	23,7	0,000
1b	5	62,5	-	-	-	-	3	37,5	0,682
2	-	-	-	-	-	-	1	100	0,711
3	17	50	-	-	3	8,8	14	41,2	0,102
1 unspecified	4	100	-	-	-	-	-	-	0,188

Legenda: VL: viral load; P: p-value

DISCUSSION

Of the 123 patients analyzed in the present study, 98 (79.7%) were carriers of the HCV virus, and 24 (20.3%) had HBV infection. These data are consistent with the results found in the study by Araújo et al. (14), which observed 62% and 38% of infections by HCV and HBV, respectively. However, these findings differ from the data by Luz et al. (15), which showed a slight predominance of HBV infection (27.74%) compared to HCV (26.65%) when analyzing the epidemiological profile of viral hepatitis in the city of Maceió from 2010 to 2020. The lower number of hepatitis B cases in the present study may be attributed to the availability of the HBV vaccine, which, when administered in 3 intramuscular doses, develops a satisfactory immune response in over 90% of patients (16). However, despite the lower number of HBV cases in the present study, more than half of the patients, including those with hepatitis C, did not have a complete vaccination schedule for hepatitis B.

When observing the sex most affected by hepatitis B and C, this study found a predominance of males for both infections, with 16 (64%) men infected with HBV and 67 (68.4%) with HCV. These findings are consistent with those described in the Ministry of Health's epidemiological bulletin (7), which evaluated the profile of viral hepatitis in Brazil from 2009 to 2019. Additionally, when analyzing other states in the country, the results of this study are similar to those of Araújo et al. (14), who found a prevalence of 58.7% and 69.41% of HBV and HCV infections in males, respectively.

These facts may be related to the greater exposure of men to risk situations, such as injectable drug use and unprotected sexual intercourse, coupled with the fact that men are less likely to seek health services (17). As a result, they are less likely to receive guidance and information about their health, making them more prone to contracting such infections. Additional data from this study that reinforce the greater neglect of men's health is the higher number of follow-up dropouts among men, 39 (47%), compared to women, 13 (32.5%).

When observing the clinical form of the infection, more than 90% of the participants in this study, both for HCV and HBV, were diagnosed in the chronic phase of the disease. These findings align with the previously mentioned study (15), in which notification in the chronic phase occurred in more than 70% of the cases. Additionally, this is consistent with the work of Timoteo et al. (18), who analyzed the profile of viral hepatitis in Brazil from 2014 to 2018, observing a prevalence of 77% of notifications in chronic patients. The prevalence of notifications in this clinical form of the disease is due to the fact that these infections are typically silent in their progression (5,6,12), thus presenting symptoms only in the more advanced stages, i.e., in the chronic form. This delays the initiation of appropriate treatment, thereby favoring the development of complications.

Regarding the educational level of the population, this study found a prevalence of individuals with incomplete elementary education, with 11 (44%) patients with hepatitis B and 38 (38%) with hepatitis C. This somewhat aligns with the study by Rodrigues et al. (19), which showed a higher prevalence in individuals with incomplete or complete elementary education in both types of hepatitis, 40.8%. These findings also correspond with the results of Luz et al. (15), who found a prevalence of 29.87% and 23.65% of incomplete elementary education among HBV and HCV carriers, respectively. However, the study by Araújo et al. (14) showed different findings, indicating a higher number of notifications in individuals with complete high school education. The occurrence of these infections in more vulnerable populations, with limited access to healthcare services (20), particularly those with lower education levels, can be indirectly associated as an aggravating factor in the chronicity of the disease, as individuals without guidance are more exposed to risk factors.

Regarding the probable source, this study observed a stronger association of hepatitis B with sexual exposure and hepatitis C with drug use. These findings are similar to those in the study by

Silva et al. (21) when analyzing HBV. However, they differ when evaluating the probable source of HCV, as the cited study showed a greater association of this virus with blood transfusion. The study by Gonçalves et al. (22), which analyzed the epidemiological and socioeconomic aspects of hepatitis B and C in Pará, identified the most prevalent exposures as the use of injectable medications, surgical treatment, and dental treatment, which are also among the most prevalent exposures in the present study, along with sexual exposure. These findings can be explained by insufficient regulation regarding proper asepsis of materials used in invasive procedures, both of medium and low complexity (23,24). Thus, despite the responsibility that healthcare services have in ensuring patient safety, they may become risk factors for individuals who seek their care.

When evaluating the presence of HBV viral markers in hepatitis C carriers among the participants of the study, it was observed that the marker for previous contact with the HBV virus, total anti-HBc, and the immunity marker, anti-HBs, were requested for only a minority of these patients. The result was reactive for anti-HBc in 7 (7.1%) individuals and for anti-HBs in 4 (4.1%). A previous study conducted by Silva (25), which analyzed the prevalence of HBV infection markers in chronic HCV carriers at a service in São Paulo, also demonstrated the presence of this marker in a minority of patients evaluated: 24% for total anti-HBc and 16% for those with both total anti-HBc and anti-HBs reactive. The presence of HBV viral markers in patients with chronic hepatitis C highlights that both infections affect similar populations, as they are often individuals lacking information and living on the margins of society. This situation contributes to the exposure to sexually transmitted infections, such as HBV, as well as the sharing of sharp objects or even the use of injectable drugs. Moreover, these infections can share transmission routes (26,27), making individuals more susceptible to contact with both HBV and HCV.

Hepatitis C was the most prevalent infection in this study. Regarding the spectrum of HCV genotypes, genotypes 1a, 3, and 1b were the most prevalent, with 42 (42.9%), 34 (34.7%), and 8 (8.2%) patients, respectively. Other studies conducted in Brazil also show a higher prevalence of genotypes 1 and 3. Malacrida et al. (28) observed a frequency of 60.3% for genotype 1 and 29% for type 3. These findings further align with the results found in Coutinho's study, which showed a prevalence of 79.1% and 16.7% for genotypes 1 and 3, respectively, with a slight predominance of subtype 1b over 1a. Thus, this study is consistent not only at a regional and national level but also globally, as it is known that the most frequent genotypes in this research are also the most prevalent worldwide, as evidenced by the work of Messina et al. (29).

Starting in 2011, a new class of medications for hepatitis C, called direct-acting antiviral drugs, was introduced. This advancement brought a higher sustained virological response and increased the chances of curing the infection (11,30), which can be observed in the present study. The most prescribed medications in this study, in descending order, were Sofosbuvir, Ledipasvir,

Daclatasvir, and Velpatasvir, which are second-generation direct-acting drugs. These align with the medications recommended by the clinical protocol and therapeutic guidelines (11) for the most prevalent HCV genotypes in this article, genotypes 1a and 3. Additionally, more than half of the patients—57 individuals (58.1%)—with this subtype of viral hepatitis who received double or triple therapeutic regimens had favorable outcomes with an undetectable viral load after completing the medication. This highlights the importance of proper pre-therapeutic evaluation, including the correct identification of the HCV genotype, so that treatment can be targeted and therefore more effective.

HIV coinfection was not observed in individuals with HBV; however, it was identified in 4 (4.08%) patients with hepatitis C, representing a small portion of the studied group. In comparison to the study conducted by Antonello et al. (31) at a public clinic in Porto Alegre, this association was observed in 11.8% of individuals. Furthermore, the most prevalent genotypes in the HIV/HCV association in the previously cited study were genotypes 1 and 3, with 70% and 30%, respectively, which aligns with the most prevalent genotypes in the present study. Since these viruses have similar transmission routes (32), future coinfections are expected in participants of the current study who did not properly undergo HCV treatment, as the main mode of transmission observed in this study was drug use, particularly injectable drugs. It is important to note that HIV/HCV coinfection accelerates the progression of hepatitis C (33), meaning that patients with this association have a worse hepatic prognosis.

Among the limitations of the study, in addition to the COVID-19 pandemic, which lasted throughout the data collection period, the fact that the notification forms and medical records were handwritten stands out. As a result, important information that would have enriched the research was overlooked when these documents were filled out. Additionally, handwriting made data interpretation more difficult, as did the lack of requested tests, such as HBV markers in patients with HCV.

However, the importance of prevention and screening for hepatitis B and C is emphasized, which can be carried out at health units in each municipality, aiming at early diagnosis and the prevention of complications. To facilitate and intensify this screening, it is necessary for healthcare professionals to be aware of the population groups most at risk of acquiring these infections. In this way, the present study becomes extremely valuable, as it provides a detailed characterization of individuals affected by HBV and HCV infections, describing their treatments, the prevalent genotypes, and the percentage of follow-up abandonment. Thus, it can serve as a resource for research for healthcare professionals in the field.

The results of the present study were able to provide a detailed clinical-epidemiological profile of hepatitis B and C carriers treated at a health service in southern Santa Catarina. A higher prevalence of hepatitis C was observed, with the most affected individuals for both infections being

male. Additionally, regarding the level of education, the prevalence was higher in individuals with incomplete elementary education. Although hepatitis B had a lower prevalence compared to hepatitis C, the majority of the studied patients were not vaccinated against HBV. While the most common previous exposure for hepatitis B carriers was associated with dental treatment, the main reported source was sexual transmission. However, it is worth noting that this latter field was ignored in more than half of the patients reported with HBV. For hepatitis C, dental treatment was also the most frequent exposure, but its main source of transmission was drug use.

HBV viral markers were not requested for all patients with hepatitis C, suggesting that previous exposure to HBV may be higher than what was presented in this study. HIV comorbidity was not observed in patients with hepatitis B, and coinfection was found in only a minority of hepatitis C carriers. The HCV genotypes of the individuals studied demonstrated a prevalence of those already observed globally. The treatments prescribed for HCV were in accordance with the clinical protocol and therapeutic guidelines for hepatitis C, although a considerable number of patients discontinued follow-up. As for hepatitis B, medication was prescribed for only one patient, as the disease progresses in phases, and its treatment is considered in specific stages.

The findings of this study highlight the importance of characterizing the population most affected by hepatitis B and C, both for early screening and to guide preventive measures. Moreover, this study also provides scientific support to guide potential discussions and interventions in health institutes.

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