Federal University of Rio de Janeiro State

Journal of Research Fundamental Care Online

ISSN 2175-5361
DOI: 10.9789/2175-5361

RESEARCH

Perfil epidemiológico de portadores de hepatite c: estudo descritivo em unidade de referência regional

Epidemiological profile of hepatitis c patients: a descriptive study on a regional reference unit

Perfil epidemiológico de los pacientes con hepatitis c: un estudio descriptivo en una unidad de referencia regional

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ABSTRACT

Objective: characterizing the epidemiological profile of patients with hepatitis C registered in a Regional Reference Center for Viral Hepatitis in the countryside of the State of Minas Gerais. **Method:** a descriptive, documental study, with quantitative analysis. The study was approved by the Research Ethics Committee, Opinion No 560 257. There were analyzed 128 reporting forms for viral hepatitis from 2007 to July 2014. **Results:** 66% of patients are male aged between 50-59 years old. 24.21 % have completed elementary school and 21.09 % university degree. Exposures to the virus reported by patients happened on dental treatment (92.9%) and on the use of injectable drugs (67.9 %). Genotype 1 virus was predominant followed by genotype 3. **Conclusion:** most of the results found by the study is consistent with that described in the literature. It is believed to be important more researches regarding this area. **Descriptors:** Viral human hepatitis, Hepatitis C, Health profile.

RESUMO

Objetivo: caracterizar o perfil epidemiológico dos portadores de Hepatite C cadastrados em um Serviço de Referência Regional para Hepatites Virais no interior do Estado de Minas Gerais. **Método:** estudo descritivo, documental, com análise quantitativa. A pesquisa foi aprovada pelo Comitê de Ética em Pesquisa, com parecer n° 560.257. Foram analisadas 128 fichas de notificação por hepatites virais no período de 2007 a julho de 2014. **Resultados:** 66% dos portadores são do sexo masculino de faixa etária entre 50 a 59 anos. 24,21% possui ensino fundamental completo e 21,09% ensino superior completo. As exposições ao vírus mais relatadas pelos pacientes foram tratamento dentário (92,9%) e o uso de medicamentos injetáveis (67,9%). O genótipo 1 do vírus foi predominante seguido do genótipo 3. **Conclusão:** a maioria dos resultados encontrados pelo estudo condiz com o descrito na literatura. Acredita-se serem importantes mais pesquisas nessa área. **Descritores:** Hepatite viral humana, Hepatite C, Perfil de saúde.

RESUMEN

Objetivo: caracterizar el perfil epidemiológico de los pacientes con hepatitis C registrados en un Centro Regional de Referencia para la Hepatitis Viral en el interior del Estado de Minas Gerais. **Método:** estudio descriptivo, documental, con el análisis cuantitativo. El estudio fue aprobado por el Comité de Ética en la Investigación, Dictamen n° 560 257. Se analizaron 128 formas de presentación de informes para la hepatitis viral a partir de 2007 a julio de 2014. **Resultados:** los 66 % de los pacientes son hombres con edades comprendidas entre 50-59 años. 24.21% ha terminado la escuela primaria y 21,09% el grado universitario. Las exposiciones al virus más divulgadas por los pacientes fueron el tratamiento dental (92,9%) y el uso de medicaciones inyectables (67,9 %). El genotipo 1 del virus fue predominante seguido por el genotipo 3. **Conclusión:** la mayoría de los resultados encontrados por el estudio es consistente con la descrita en la literatura. Se cree que es importante realizar más investigaciones en esta área. **Descriptores:** Hepatitis viral humana, Hepatitis C, Perfil de la salud.

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INTRODUCTION

In Brazil it can be seen through literary references that there are few studies on the clinical and epidemiological profile of Hepatitis, and the available data have limited coverage and not very enlightening.

An aggravating factor is the incomplete filling of the notification form by health professionals, a fact found in epidemiological bulletin of viral hepatitis made available by the Ministry of Health, in which various fields are filled or skipped or blank.[1] According to the instructions for completing the notification form, some fields are required, there are those in which the non-fulfillment preclude the inclusion of the notification in the National Notifiable Diseases System (SINAN), but are still detected several fields unfilled.

Universal distribution of hepatitis C is estimated at 184 million people infected with the hepatitis C virus - HCV.[2] It is considered as one of the greatest problems of global public health and one of the factors contributing to this situation is the fact that condition be in most often an asymptomatic infection and a chronic course insidious.[2] It represents 70% of chronic hepatitis cases, 70% of liver transplants, 60% of cases of liver cancer and 40% of cases of liver cirrhosis.[3]

In Brazil, between 1999 and 2011 there were reported 82041 confirmed cases of hepatitis C, of these, 67,3% are provinient from the Southeast and 22,3% in the South Region.[1]

In 2010 the rate of cases of hepatitis C detection in the southeastern region was of 8,1 per 100.000 inhabitants, higher than the national average of that year (5,4). In the Southeast between 1999 and 2010 the detection rate was higher than the national average.[1]

Viral hepatitis is caused by hepatotropic virus. The main types are A, B, C, D and E.[4] The virus invades the liver cells is reproduced, weakening these cells causing inflammation.[5] In 70% to 85% of cases occur chronicity. If no therapeutic intervention, on average, one quarter to one third of these cases within 20 years, may progress to severe histological forms or cirrhosis.

Regardless of the type of virus most acute hepatitis are asymptomatic. When they present symptoms are characterized by jaundice, fecal hipocholia, malaise, headache, low grade fever, anorexia, asthenia, fatigue, arthralgia, nausea, vomiting, discomfort in the right upper quadrant and aversion to some foods and cigarette.[6]

HCV is grouped into six major genotypes (1-6) and numerous subtypes identified by alphabetic letters. In Brazil it is the predominant genotype 1 in 50 to 70% of cases, type 2 and 3 in 3% and type 3 in 25% of cases. Cases with genotype 4 and 5 are rare, and until October 2009 there were no reports of infection type 6.[3]

The major route of transmission is parenteral, sexual and vertical transmission are uncommon.[3] Individuals who received blood transfusions before 1993, illicit drug users, people who share skin-piercing instruments such as nail clippers, razors, materials for application of piercings and tattoos, are considered vulnerable to hepatitis C.[3]

Diagnosis is through signs and symptoms already described and by nonspecific tests (ALT and AST, bilirubin measurement, prothrombin time, serum proteins, blood count and alphaprotein) that assist in the diagnosis and specific serological tests that are Anti-HCV (antibody against hepatitis C virus) and HCV-RNA (HCV-RNA).[7]

The recommended regimen is the administration of interferon-alpha (INF) in combination with ribavirin (RBV) for a period 48 to 72 weeks, according to genotype. Treatment goals are: elimination of viral replication, stop the evolution of the histopathological lesions, improve liver function, reduced risk of progression to hepatocellular carcinoma and reducing the demand for liver transplants.[8]

However, before the advance of knowledge about the disease and treatment we can see still the need to investigate the clinical and epidemiological issues of people with Hepatitis C in order that the results may help control this endemic disease, intensifying the prevention and detection of population vulnerable to acquiring the hepatitis C virus, as well as demonstrate to healthcare professionals the importance of the full completion of the notification form. On the research of the above aims to characterize the clinical and epidemiological profile of patients with hepatitis C registered in a Regional Reference Center for Viral Hepatitis in Minas Gerais.

METHOD

The study is descriptive, documentary, with analysis approach of quantitative data. The documentary research was carried out through the medical records of patients with hepatitis C registered in the Regional Reference Service Viral Hepatitis steps - MG 2007 to July 2014. Totaling 128 people infected with hepatitis notified in SINAN.

"The descriptive study notes, records, analyzes and correlates events or phenomena without manipulating them"[9:61] The documentary research is characterized by data collection exclusively on documents, written or not.[10] Quantitative analysis aims to get accurate results, exact, proven through measures of predetermined variables in this way seeks to compare and explain their influence on other variables.[11]

The data obtained by the instrument were analyzed and interpreted by simple descriptive statistics.

The study had authorization by the Regional Coordination of Viral Hepatitis Regional Referral Service of the city of Passos - MG. The project was submitted to the Research Ethics

Committee (CEP) of the Foundation of Higher Education of Passos - MG (HSPA), which was adopted under Opinion 560.257.

The service which the data was collected has a range of 18 municipalities of micro Passos-Piumhi. However, extends to other municipalities due to user preference service, with a total coverage of 24 municipalities that corresponds to the municipalities of the Regional Health of Passos.

It used specific form of research/reporting of viral hepatitis prepared by the Ministry of Health which is completed for all patients in referral centers for hepatitis.

RESULTS AND DISCUSSION

It should be noted, before the presentation of the results of this study, which found several mandatory fields not filled in, making it impossible to obtain exactly the clinical and epidemiological profile of patients with hepatitis C reported. Moreover, demonstrate that the professionals who perform the notifications do not associate filling the collective diagnosis, monitoring, planning and evaluation of actions and assistance.

In 2009 and 2012 there were as many notifications, with 23 (17,96%) cases, respectively, followed by 2010 with 22 (17,18%) cases. Having among them a decline notifications in 2011 with 10 (8%) cases.

In the related field Federated Unit (UF), 118 (92%) of the notifications were filed as Minas Gerais. And, 10 (8%) notifications were not met.

Of 128 (100%) of the reported cases, 122 (95%) were in the city of Passos, 04 (3%) were not met, 01 (1%) was reported in São João Batista do Glória and 01 (1%) in Piumhi.

Health facilities where there were the largest numbers of notifications were the Central Polyclinic Dr. Antonio Carlos Piantino with 57 (44,53%) notifications, this Polyclinic is where is typing notifications in SINAN Program. In the clinic school, where is located the Regional Reference Center for Viral Hepatitis there were 33 (25,78%) of reported cases. Then also appear Hemominas the institutions and the Santa Casa da Misericordia de Passos with 09 (7,03%) each. They found 07 (5,46%) notifications with this blank.

The years 2008 and 2010 were the most commonly cited by patients as date of onset of symptoms, with 21 (16,4%) notifications each. It is possible to connect the date of notification, because as previously mentioned the years 2009 and 2010 there were a large number of notifications.

Table 1. Distribution of cases of hepatitis C reported from 2007 to July 2014, according to age. Passos-MG, 2014.

AGE	N°	%

<20	01	0,78
20 - 29	08	6,25
30 - 39	10	7,81
40 - 49	38	29,6
50 - 59	41	32,0
60 - 69	17	13,2
≥70	02	1,56
In blank	11	8,59

The predominant age range of patients when notified shown in Table 1 was between 50-59 years old, corresponding to 41 (32,0%) of individuals, followed by ages 40 to 49 years old, equivalent to 38 (29,6%) of patients . The average age of the 128 patients was 48,63 years old.
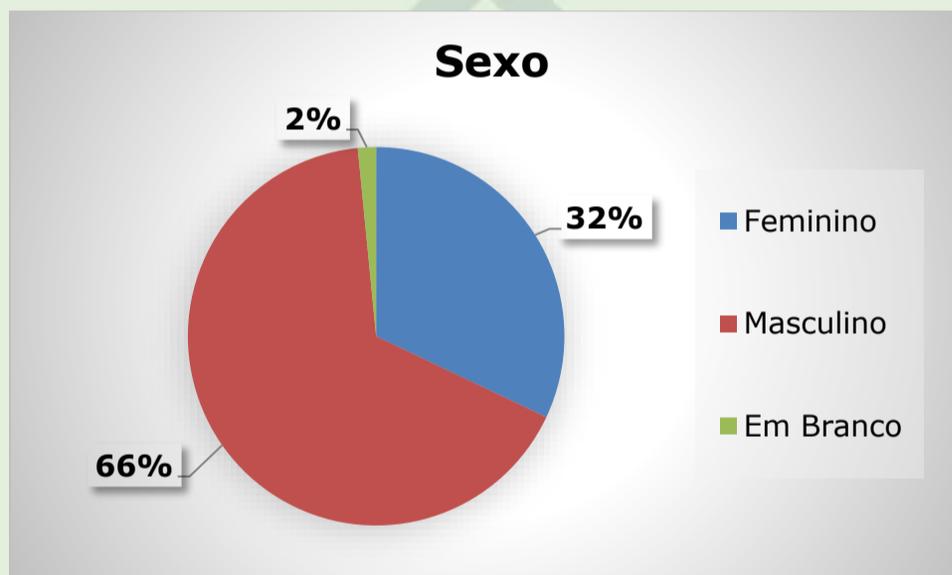
Figure 1. Distribution of cases of hepatitis C reported from 2007 to July 2014, according to gender. Passos-MG, 2014.

The predominant age range of patients when notified shown in Table 1 was between 50-59 years old, corresponding to 41 (32,0%) of individuals, followed by ages 40 to 49, equivalent to 38 (29,6%) patients . The average age of the 128 patients was 48,63 years old.
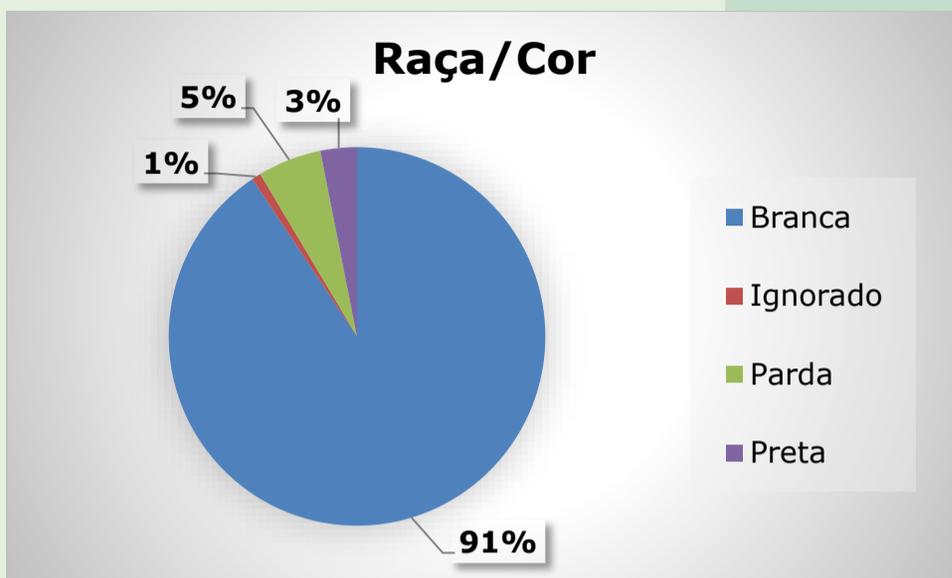
Figure 2. Distribution of cases of hepatitis C reported from 2007 to July 2014, according to the race. Passos-MG, 2014.

Regarding the color shown in Figure 2, 116 (91%) of patients declared themselves to be Caucasian, 07 (5%) of the brown race, 04 (3%) black and 01 (1%) notification was completed as ignored.

Figure 3. Distribution of cases of hepatitis C reported from 2007 to July 2014, according to schooling. Passos-MG, 2014.

Figure 3 comes to education, 31 (24,21%) of patients with hepatitis C have until the 4th complete series, 27 (21,09%) had complete higher education.

Of 128 (100%) of patients with hepatitis C, 96 (75%) have as a federal unit the State of Minas Gerais and in 32 (25%) were not filled this field.

Large number of notified patients lies in Passos-MG, 98 (76,56%) patients. Next are 12 (9,37%) notifications with this unfilled field, making it difficult to know the real situation of hepatitis in the city. The cities of Itaú de Minas and Piumhi have 04 (3,12%) patients residing in each of these cities.

The Center neighborhood was predominant both in the city of Passos-MG with 22 (17,18%) residents infected with hepatitis C as in the city of Itaú de Minas with a total of 03 (2,34%). 20 (15,62%) notifications, this field was not filled.

With respect to addition, 02 (1,56%) were filled as house, 02 (1,56%) as apartment, 123 (96,0%) were in blank and 01 (0,78%) as Cohab II. The latter it is a neighborhood located in Passos-MG, it is assumed that there was a lack of attention by the professional to fill this field.

It was noted a diversity in the field referring to the occupation. The most prevalent was retired with 19 (14,8%), followed by "home" with 16 (12,5%), marketer with 13 (10,1%). And 07 (5,46%) were in blank.

With reference to the immunization schedule against hepatitis A, only 01 (0,78%) has the complete vaccination schedule, 123 (96%) are not vaccinated and 04 (3,12%) notifications that field was in blank. Related to the hepatitis B vaccine, 109 (85,1%) were unvaccinated, 13 (10,1%) received 3 doses of vaccine, 02 (1,56%) have incomplete scheme in 03 (2,34 %) notifications found this field blank and 01 (0,78%) filled in as ignored.

In the field of comorbidities, 123 (96%) of patients are not HIV/AIDS, 01 (0,78%) are HIV-positive, 01 (0,78%) were filled as ignored and 03 (2,34%) were in blank. Regarding other sexually transmitted diseases, 122 (95,3%) never showed any STD, 02 (1,56%) had at some point in their lives, 01 (0,78%) was filled as ignored and 03 (2,34%) in blank.

Table 2. Distribution of cases of hepatitis C reported from 2007 to July 2014, according to the types of exhibitions. Passos-MG, 2014.

The patient was subjected or exposed to	N°	%
Injectable drugs		
Yes, for more than six months	87	67,9
No	39	30,4
In blank	1	0,78
Ignored	1	0,78
Inhalable drugs or crack		
Yes, for more than six months	26	20,3
No	99	77,3
Ignored	3	2,34
Contaminated food/water		
No	128	100
Injectable drugs		
Yes, for more than six months	26	20,3
No	99	77,3
Ignored	3	2,34
Three or more sexual partners		
Yes, for more than six months	53	41,4
No	67	52,3
In blank	3	2,34
Ignored	5	3,90
Transplantation		
No	124	96,8
In blank	2	1,56
Ignored	2	1,56

Tatoo/piercing		
Yes, for more than six months	12	9,37
No	113	88,2
In blank	1	0,78
Ignored	2	1,56
Acupuncture		
Yes, for more than six months	1	0,78
No	123	96,0
In blank	1	0,78
Ignored	3	2,34
Surgical treatment		
Yes, for more than six months	54	42,1
No	70	54,6
In blank	1	0,78
Ignored	3	2,34
Dental treatment		
Yes, for more than six months	115	89,8
Yes, for less than six months	4	3,12
No	5	3,90
In blank	2	1,56
Ignored	2	1,56
Hemodialysis		
No	124	96,8
In blank	2	1,56
Ignored	2	1,56
Other		
Yes, for more than six months	2	1,56
No	119	92,6

Table 2. Continuation

In blank	5	3,90
Ignored	2	1,56
Accident with biological material		
Yes, for more than six months	4	3,12
No	120	93,7
In blank	2	1,56
Ignored	2	1,56
Blood transfusion/derivatives		
Yes, for more than six months	26	20,3
No	96	75,0
In blank	1	1,56
Ignored	5	3,90

It can see in Table 2 that the largest exposures appointed by users occurred through dental treatment, use of injectable drugs and surgical treatment.

The classification in the 128 (100%) patients was laboratory confirmation. And the clinical form classified as chronic hepatitis/asymptomatic carrier in 127 (99,2%) patients and 01 (0,78%) was in blank.

With respect to genotype 1 was predominant in 53 (41,4%) patients, followed by genotype 3 in 50 (39,06%) 2 15 (11,7%) and white was found in 10 (7,81%) of the notifications.
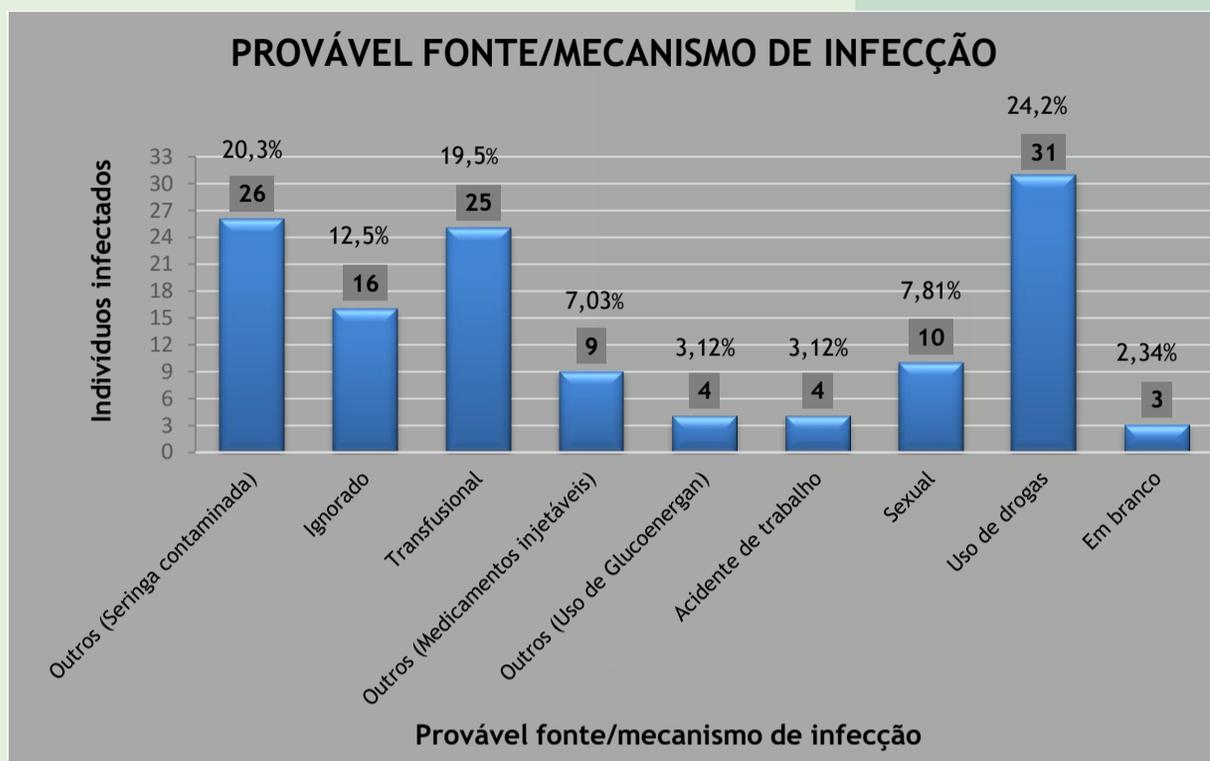
Figure 4. Distribution of cases of hepatitis C reported from 2007 to July 2014, according to the probable source of infection. Passos-MG, 2014.

Figure 4 is the likely source/hepatitis C infection mechanism. Note that the highest number of infection resulted from drug use with 31 (24,2%) cases, followed by use of contaminated syringe with 26 (20,3%) and blood transfusion with 25 (19,5%). Importantly, it was identified 16 (12,5%) as ignored and 3 (2,34%) in blank.

From the analysis of data obtained by the research it was possible to survey some relevant aspects of the clinical and epidemiological profile of patients with hepatitis C registered in the Regional Reference Service of Viral Hepatitis of Passos-MG.

It is believed that there was a higher fill notifications in the municipality of Passos; therefore, the Reference Center for Viral Hepatitis is installed in that city.

Regarding the predominant age group, this result was also found in a recent study by Mello, Motta and Santos[12] in a high complexity hospital in a city in southern Brazil, where the most affected group was 50 to 60 years old, with 66 (69,47%) individuals. Followed by the age group between 40 to 49 years old with 15 (15,71%) of patients.

It is supposed that this prevalence is related to blood transfusions made up to 1993, under which the test for hepatitis C detection in donors was not done. It is believed also in relation to the reuse of syringes for very common glucoenergan administration in the 60 to 80. Since that time the needles and syringes were not discarded and the process of boiling these materials was unable to inactivate the virus.[13]

Referring to sex, it is clear in the literature that the male is still prevalent, a study by Araújo *et al*.[14] with 69 people with hepatitis C, 45 (65,2%) patients were male. Mello, Motta and Santos[12] in a study with 95 patients with hepatitis C, 51 (53,8%) were male. Gomes, Tocantins and Souza[14] found in their research that men have more attitudes that leave them more susceptible to hepatitis C as using injectable or inhalable drugs and alcohol, and engaging in sexual intercourse without using a condom, and one many of these patients received blood transfusion until the 90s.

Related to ethnicity the finding in this study is similar to that found in the literature, Cruz *et al*.[16] conducted a survey of 763 people with hepatitis, and 651 patients with hepatitis C; from these, excluding the data considered 84% were white. In the study by Mello, Motta and Santos[12], 95 people with hepatitis C the white race predominated in 85 (89,47%) individuals.

It is believed that the question of the level of education was not a factor that influenced the contamination of hepatitis C. In the study carried out by Cruz *et al*.[16] in the 2004-2007 period at a public hospital in São Paulo with 651 people with hepatitis C was detected 51,5% of the Field filled as ignored, followed by 18,3% with schooling over 12 years.

Regarding occupation it is possible to see a correlation of retirees with the results found regarding the age, in which 19 patients were reported aged > 60 years old. The result is similar to a survey conducted by Mello, Motta and Santos[12], in which it was identified a higher percentage of retired individuals (37,84%); and the female prevalence, in relation to the occupation of the home (38,64%).

Referring to the vaccination schedule in the study of Cruz *et al*.[16] of 651 people with hepatitis C 50,8% were not vaccinated against hepatitis B, only 11,1% had a complete vaccination.

The largest exposures mentioned by patients in this study is consistent with the result of a study by Farias *et al*.[17] with 183 people with hepatitis C who participated in this study, 72 (39,3) were exposed to dental treatment, 53 (29,0 %) to surgical treatment and 46 (25,1%) the use of injectable medications. Mello and Santos Motta[12] to 95 greater exposures suffered by patients with hepatitis C, in the dental treatment was 75 (78,95%) patients.

The finding regarding the confirmation of the disease was also described by Cruz *et al*.[16] in which 60,8% of the confirmation of 651 patients with hepatitis C was laboratory.

Regarding this predominant genotype confirmed what described in several studies.[3,18-19] Recently a study by Araújo *et al*.[14] of 69 patients with hepatitis C, 24 females and 45 males, genotype 1 excelled in both genders. It is present in 13 (54,2%) women and 34 (76,1) men. Concerning genotype 3, the same study found in 06 (25%) women and 09 (8,82%) men.

It is noted in studies that the main route of contamination is still prevailing parenteral.[20-21] It can be seen that despite the large number of patients who have undergone exposure through dental and surgical treatment, as described in Table 5, these were not considered as a probable source of infection, perhaps by believing in the correct sterilization of the materials used by the professionals who perform the procedure.

CONCLUSION

Through this research it was possible to identify the epidemiological profile of patients with hepatitis C registered in the regional reference center for viral hepatitis of Passos-MG. Characterized by: male; predominant age group between 50-59 years old; white race; education up to 4th grade; residents in Passos-MG; retired; not vaccinated against hepatitis A and hepatitis B; most are not carriers of HIV/AIDS and never had an STD; confirmation of pathology in all patients was laboratory; the predominant clinical presentation was chronic/asymptomatic carrier hepatitis; genotype 1 predominated; the largest exposures occurred through dental treatment, use of injectable drugs and surgical treatment; however, most were reported as having probable source/infection mechanism of drug use.

Most of the results found by the study is consistent with that described in the literature. It shows a lot of fields unfilled even in required fields. Thus, it is suggested an improvement for professionals responsible for completing the notification forms, and narrowing the surveillance system in this regard. Moreover, believes it is important more research in this area, since, because it is a public health problem, become a need for better information about viral hepatitis, to assist in the implementation of measures to prevent and control viral hepatitis.

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