

Knowledge, Attitudes and Practices of Persons Infected with the Hepatitis B Virus on Their Own Disease

Arnaud Mongo-Onkouo^{1,2*}, Ngala Akoa Itoua-Ngaporo^{1,2}, Clausina Philestine Ahoui Apendi^{1,2}, Jile Florent Mimiesse Monamou^{1,2}, Rody Ngami¹, Marlyse Ngalessami Mouakosso¹, Mardoché Motoula Latou¹, Deby Gassaye^{1,2}, Blaise Irénée Atipo Ibara^{1,2}, Jean-Rosaire Ibara^{1,2}

¹Department of Hepatogastroenterology and Internal Medicine, Brazzaville Hospital and University Center, Brazzaville, Congo

²Faculty of Health Sciences, Marien Ngouabi University, Brazzaville, Congo

Email: *mongoonkouo@gmail.com

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Abstract

Introduction: Viral hepatitis B is a communicable disease that is preventable by vaccination. Knowledge of transmission routes and prevention methods could play a key role in limiting and reducing the spread of the disease. **Aim:** This was a prospective study that was carried out from July 1 to September 30, 2018 in the department of gastroenterology and internal medicine in people carrying the hepatitis B virus. All patients were asked about their knowledge, attitudes and practices regarding viral hepatitis B. **Materials and Methods:** This was a cross-sectional study, collecting prospective data, which was carried out from July 1 to September 30, 2018 in the gastroenterology department of CHUB (University Hospital of Brazzaville). Eligible for the study were all patients who consulted or were followed in the ward for HBV infection during the study period. All patients were asked about their knowledge, attitudes and practices regarding viral hepatitis B. After obtaining informed consent, we asked patients about knowledge, attitudes and practices towards the hepatitis B virus. The data was collected on a pre-established survey sheet respecting anonymity and confidentiality. CPro 7 software and SPSS 17 software were used for data entry and analysis. Chi-square was used to compare the percentages. These were expressed with their 95% confidence intervals [95% CI]. A value of $p < 0.005$ was considered significant. **Results:** Forty-two patients were included in the study, these were 66.7% ($n = 28$) men and 33.3% ($n = 14$) women. The average age was 38.76 ± 10.9 years. 45.2% of them ($n = 19$) were single and 59.5% ($n = 25$) had the next highest level of education. Thirty-nine patients had no knowledge of the source of their contamination; the sexual route was the most cited (61.9%). Alcohol consump-

tion was rated badly by 38 patients (90.5%); of these 22 (52.4%) thought it worsened the disease. Lack of knowledge of an HBV carrier in the family was noted in 33 (78.6%) patients; 20 (47.6%) patients did not talk about their illness in their entourage or family because of the risk of stigma. Only 19% (n = 8) of patients will have their children vaccinated. The existence of a vaccine was known by 31 patients; the condom was the means of prevention cited by 21 patients. Those who were aware of the existence of a treatment were 33. Sexual abstinence was observed by seven patients. The doctor was the source of information for 22 patients. High level of education and male gender were associated with a good knowledge of prevention and treatment. **Conclusion:** The knowledge of patients carrying the hepatitis B virus is incomplete. Their attitudes and practices do not reduce the spread of the disease. Strengthening public awareness of viral hepatitis is necessary.

Keywords

Viral Hepatitis B, Knowledge, Attitudes, Practices, Carriers Brazzaville

1. Introduction

Infection with the hepatitis B virus (HBV) is a major public health problem. It is estimated that 2 billion people are infected with HBV, 350 to 400 million the number of chronic carriers of HBV. Africa is a highly endemic area for HBV infection [1] [2].

In Congo, the hepatitis B virus is one of the primary causes of cirrhosis as well as hepatocellular carcinoma [2]. HBV infection is preventable through prevention, including control of risk factors and vaccination [3]. A good knowledge of the routes of contamination and the means of control will limit and reduce the spread of the infection. Literature on the knowledge, attitudes and practices of people infected with hepatitis B virus appears to be scarce. While the knowledge, attitudes and practices of healthcare professionals have been assessed in our country, those of people with HBV infection have not yet been assessed. This is how we conducted the present study in order to assess the knowledge, attitudes and practices of people with HBV infection to contribute to the fight against HBV.

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2. Materials and Methods

This was a cross-sectional study, collecting prospective data, which was carried out from July 1 to September 30, 2018 in the gastroenterology department of CHUB (University Hospital of Brazzaville). Eligible for the study were all patients who consulted or were followed in the ward for HBV infection during the study period. We conducted consecutive systematic sampling of all patients followed for hepatitis B during the study period. All patients were asked about their knowledge, attitudes

and practices regarding viral hepatitis B. After obtaining informed consent, we asked patients about knowledge, attitudes and practices towards the hepatitis B virus. The data was collected on a pre-established survey sheet respecting anonymity and confidentiality. The study variables were epidemiological (age, sex, occupation, marital status, level of education, presumed source of contamination, route of contamination, source of information, alcohol consumption), biological variables (HIV status of the person and his or her spouse), therapeutic variables (vaccine, serum, medications, condoms). Knowledge, practices and attitudes were assessed in relation to data from the scientific literature. The practices concerned what they practice in everyday life after the discovery of their HIV status, *i.e.* using condoms or not, stopping alcohol consumption or not, practicing abstinence or not, stopping sexual intercourse or not. The attitudes concerned what they did after the discovery of their disease that is to say, to detect or not their entourage, to vaccinate or not their entourage, if it is the vaccination which is the person to vaccinate? We have not established an evaluation grid. CSPro 7 software and SPSS 17 software were used for data entry and analysis. Chi-square was used to compare the percentages. These were expressed with their 95% confidence intervals [95% CI]. A value of $p < 0.005$ was considered significant.

3. Results

During the study period, 42 patients were included in the study, these were 28 men (66.7%) and 14 women (33.3%). The mean age was 38.76 ± 10.9 years (range: 21 - 71 years). Single people represented 45.2% of patients ($n = 19$), those who were common-law 33.3% ($n = 14$) and married 21.4% ($n = 9$). Patients with higher education accounted for 59.5% ($n = 25$), those with secondary education were 35.7% ($n = 15$) and two patients (4.8%) had primary. 39 patients (92.9%) had no knowledge of the source of their contamination. Two patients (4.8%) evoked horizontal contamination and 1 patient (2.4%) thought they had been contaminated by blood transfusion. Unprotected sex was the mode of infection mentioned by 61.9% of patients ($n = 26$); 26.2% ($n = 11$) had no knowledge of the routes of contamination. 7.1% ($n = 3$) patients reported transmission by blood transfusion, 4.8% ($n = 2$) of patients reported materno-fetal transmission. Alcohol consumption was found to be unhealthy 38 (90.5%) patients; of these 22 (52.4%) thought it worsened the disease. Lack of knowledge of the HBV carrier in the family was noted in 33 (78.6%) patients, nine patients (21.4%) knew a member of their entourage with HBV. Twenty (47.6%) patients did not mention their illnesses to their entourage or family because of the risk of stigma. Only 8 (19%) patients will have their children vaccinated; the existence of a vaccine being known by 31 (73.8%) patients while 11 patients (26.2%) did not know that there was a vaccine. The condom was the means of prevention cited by 21 patients (38.1%); 16 (38.1%) patients cited vaccination and 5 (11.9%) had no knowledge of prevention. The existence of a treatment was known by 33 patients (78.6%) compared to 9 patients (21.4%) who did not know. The attitude adopted

by the patients to protect themselves was the wearing of condoms for 16 patients (38.1%) and abstinence for 7 patients (16.7%). **Table 1** shows the distribution of patients according to the attitude adopted to protect. The doctor was the source of information for 22 (52.4%) patients. **Table 2** shows the distribution of patients according to the source of information. High level of education and male gender were associated with good knowledge of prevention and treatment as well as good attitudes towards the disease themselves. **Table 3** shows the bivariate analysis on the level of education and availability of treatment. **Table 4** represents the bivariate analysis between age and availability of treatment.

Table 1. Distribution of patients according to the attitude to adopt to protect themselves.

Attitude adopted towards oneself	n	%
Condom	16	38.1
Stop sex	7	16.7
Alcohol withdrawal	9	21.4
Abstinence	3	7.1
Be clean	1	2.4
Nothing	4	9.5
Treatment	1	2.4
Vaccination	1	2.4

Table 2. Distribution of patients by source of information.

Information source	N	%
Physician	22	52.4
Pressa	6	14.3
Entourage	7	16.7
Church	1	2.4
Internet	3	7.3
Media	1	2.4
AIDS seminar	1	2.4
Laboratory technician	1	2.4

Table 3. Multivariate analysis between educational level and patient attitudes.

Variables	Attitude		OR	95% IC	P
	(Screening, vaccine)	Nothing			
Educational level					
Primary	2	0	-	-	0.48
Secondary	15	0	-	-	0.01
Superior	17	8	-	-	0.01

Table 4. Multivariate analysis on the knowledge of the existence of the treatment.

Variables	Existence of treatment		OR	95% IC	P
	Yes	No			
Age range					
<25 ans	2	4	0.06	0.008 - 0.47	0.001
25 - 35 ans	10	1	3.04	0.32 - 28.1	0.3
35 - 45 ans	11	1	3.5	0.38 - 32.12	0.24
45 - 55 ans	8	3	0.96	0.16 - 5.7	0.96
55 - 65 ans	1	0	-	-	0.61
≥65 ans	1	0	-	-	0.61
Sex					
Male	25	3	5.2	1.01 - 26.7	0.03
Féminine	8	6	0.19	0.03 - 0.98	0.03
Educational level					
Primary	1	1	0.25	0.014 - 4.4	0.13
Secondary	10	5	0.34	0.07 - 1.5	0.16
Superior	22	3	4	0.8 - 19.1	0.07

Table 5. Multivariate analysis and knowledge of the existence of the vaccine.

Variables	Existence of vaccine		OR	95% IC	P
	Yes	No			
Age range					
<25 ans	3	3	0.25	0.04 - 1.5	0.11
25 - 35 ans	10	1	0.05	0.005 - 0.47	0.001
35 - 45 ans	11	1	4.9	0.55 - 44.36	0.12
45 - 55 ans	5	6	0.19	0.04 - 0.9	0.03
55 - 65 ans	1	0	-	-	0.56
≥65 ans	1	0	-	-	0.56
Sex					
Male	22	6	2.44	0.56 - 10.54	0.22
Féminine	9	5	0.4	0.09 - 1.9	0.22
Educational level					
Primary	0	2	0	-	0.01
Secondary	9	6	0.4	0.09 - 1.9	0.22
Supérieur	22	3	5.7	1.19 - 27.11	0.02

4. Discussion

We interviewed 42 patients with HBV; 92.9% of them do not know the source of

their contamination. This can be explained by the fact that in Africa, infection with HBV is predominantly linked to mother-to-child transmission; the prevalence of mother-to-child transmission is estimated to be around 20% - 43.2% [4] [5]. Horizontal intra-family transmission is another reason that could explain the ignorance of the source of contamination. Ntagirabiri *et al.* reported a similar result (94.1%) [4]. In our survey, sexual contamination was the most familiar to patients. For many authors and in our study, this knowledge is explained by the similarity of the routes of contamination with HIV infection [4] [5] [6]. Maternal-fetal transmission remains less known by patients in our survey (2.8%). However, it is high in sub-Saharan Africa [4] [5]. Few of the patients (19%) used the vaccination to protect those around them from HBV infection. It can indeed result in bad practices and attitudes towards viral B infection. Our results corroborate those of Ntagirabiri *et al.* who report 21.6% of patients who were unaware of the virus transmission routes [4]. Lawson *et al.* [7] report a high frequency of 37.4% of respondents who did not know the transmission routes. This is justified by the heterogeneous character of the population in their study; they had taken into account all the patients who consulted while in ours it was only patients with HBV [7]. We have noticed as many patients who talk about their disease in those around them as those who do not talk about it. Fear of stigma is the most common reason for those who don't talk about it. Among those who speak about it, only 21.4% declared having a member of their entourage carrying HBV. The status of the spouse is not known in 54.8% of respondents. With this in mind, it should be emphasized that people with HBV should be encouraged to talk freely about their infection with those around them. Lack of information from those around them can result in a lack of systematic screening and vaccination of the latter, the perpetuation of the infection and the onset of complications often diagnosed at a late stage. Alcohol consumption is considered harmful by half of the patients; in fact, alcohol is hepatotoxic, its consumption increases the probability of developing cirrhosis if it is associated with hepatitis B [8]. Patients with higher education level were the most represented. The high level of education (secondary and higher) is linked to the knowledge of patients with HBV. **Table 5** shows the multivariate analysis on knowledge of the existence of the vaccine. Other African authors make the same observation [4] [7]. Mukherjee *et al.* in India cite misunderstanding of medical jargon and the terms used to explain HBV infection to patients who contribute to their lack of knowledge of the infection [9]. Doctors are the source of information for patients, followed by the press and patients' families. This could be explained by the absence of continuous training on viral hepatitis with doctors as well as the absence of an awareness campaign on HBV in the media. The media (television, radio, internet, written press) are the preferred channels for informing the population. The hospital, the ideal meeting place for patients, must also be a channel for education, training and public awareness. In Togo, the media and the hospital are the main source of patient information [7]. In the study by Nomanul Haq [10] in

Pakistan, the main source of information is entourage (36.4%) followed by leaflets, brochures and posters (17.7%); media and internet are mentioned. No patient in our study mentioned the leaflets and brochures.

Study limitation: The main limitation of the study is the sample size given that hepatitis B is a public health problem in our country. The problem of study size is related to the study period which is relatively short in our series.

5. Conclusion

The knowledge of patients with HBV about their disease is insufficient. Their attitudes and practices towards HBV infection are not conducive to reducing its spread. Lack of knowledge about vaccination and treatment do not argue in favor of limiting infections and their complications. The multiplication of awareness campaigns, continuous training for doctors and the integration of patients with the disease in the fight against this infection is necessary to contribute to the elimination of HBV infection.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Survey Sheet

N°:..... phone number:.....

Date of birth:/...../..... eitheryears

Address: district:.....

Sex: masculine female

Civil Status: single married cohabitation

Level of education: primary secondary high school
university studies postgraduate studies

Profession: state employee private sector employee retired student
self-employed worker Unemployed person
without occupation

Suspected source of contamination:

cite a mode of contamination:.....

alcohol consumption: good bad safe

Why:.....

Do you know someone you know who has HBV: yes no

If yes specify the linkspecify: brother sister parents spouse child

other

specify.....

Talk to yourself about your illness with those around you? yes no

If no why?.....

What are the means of prevention? Vaccine condom

Is there a vaccine? yes No

There is a treatment? yes no

Is it effective? yes no

What attitude do you adopt in relation to surrounding? Screening vaccine

if vaccine specify who: child spouse brother/sisterer

What attitude do you adopt for your health: condom stopping sexual intercourse

alcohol withdrawal tabacco withdrawal

others specify:.....

Sources of information: doctor press surroundings Others

Status of patient: AgHBs+ Ac antiHBc AgHBe cirrhosis

Status of spouse: AgHBs Ac antiHBc Cirrhosis