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Therapeutic Itinerary of Patients Living with Viral Hepatitis B and C in Guinea

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Abstract

Introduction: The therapeutic pathway affects the patient who changes care facilities. This change is linked to factors such as financial means, geographical accessibility of care facilities, quality of care and the socio-cultural perception of the patient. In countries with limited resources such as Guinea, the therapeutic itinerary remains multiple and hampered by obstacles. The objective of this study was to describe the therapeutic itinerary of patients living with hepatitis B and C at the Donka National Hospital. **Material and methods:** This was a retrospective, descriptive study lasting 43 months (24 January 2017 - 27 August 2020); it focused on patients living with hepatitis B or C or viral cirrhosis. We collected sociodemographic, clinical and treatment history variables. The data were analysed with SPSS software version 21.0. **Results:** Out of 5400 patients, the proportion of viral hepatitis B or C represented 393 patients (7.3%). The mean age of our patients was 35 ± 10 years, with extremes of 16 - 77 years. The sex ratio was 2.5. Three hundred and forty-two patients (87%) had recourse to modern medicine, mostly in private facilities (50.6%). One hundred and twenty-five patients (31.8%) had received previous treatment, half of whom (57.6%) had received inappropriate treatment. The delay in treatment was long in 45% of cases. The main reasons for delaying treatment were feeling unwell in 33.3%; not knowing to consult a specialist in 29.9% and feeling that they were being treated with useful drugs in 24.3%. **Conclusion:** The lack of training of general practitioners on the management of viral hepatitis and the scarcity of awareness campaigns on viral hepatitis contributed to the inadequacy of the management.

Keywords

Therapeutic Itinerary, Hepatitis B, Hepatitis C, Guinea

1. Introduction

In the management of all pathologies in developing countries such as Guinea, patients often follow a variable therapeutic circuit linked to various factors [1]. The therapeutic itinerary has an impact on the patient who changes care structures during the course of his or her treatment. This change is linked to a number of factors, including financial means, geographical accessibility of care structures, quality of care and the patient's socio-cultural perception [2].

Unlike in developed countries where patients have universal health coverage, where access to care is shorter, in Africa patients access care late [3] [4]. The reasons for the long delay in treatment include self-medication and inadequate care, which often leads to complications linked to this late treatment [5] [6].

Viral hepatitis, particularly B and C, is a global health challenge with complications such as cirrhosis and hepatocellular carcinoma, the mortality of which is estimated at 15% to 25% worldwide [7].

Sub-Saharan Africa is known for its high endemicity with a prevalence of hepatitis B of 8% [8].

In Guinea, the hospital and prison frequencies of viral hepatitis B vary from 8% - 27.7% [9] [10]. In view of this high prevalence, a restructuring of national programmes by the Ministry of Health in 2018 led to the integration of a hepatitis control unit into the National AIDS Control Programme, hence the name PNLSH. However, this unit has few resources to support patients in their care pathway; as a result, patients use non-conventional care resources for the management of the viral hepatitis.

Thus, the description of the patients' itinerary could lead to the identification of strategies to prevent complications related to hepatitis B and C. This is why we conducted this study, the objective of which was to describe the care itinerary of patients living with viral hepatitis B or C in the Donka internal medicine department.

2. Material and Methods

The Internal Medicine Department of the Donka National Hospital served as the setting for this study.

It was a retrospective, descriptive study lasting 43 months (from 24 January 2017 to 27 August 2020). Data collection was exhaustive for all patients aged over 15 years, with B viral infection (HBsAg positive by the ElFA technique and persistent beyond six months) and/or C viral infection (positive anti-HCV Ac and HCV RNA by PCR) or viral cirrhosis and consenting to participate in the study. We collected socio-demographic variables (age, sex, marital status, occu-

pation), clinical variables and the patients' therapeutic itinerary (structures consulted, previous treatments, time to treatment), by telephone call and direct interview, by completing a pre-established questionnaire. These variables enabled us to identify the patient's care pathway as well as the delay and the reason for the delay in care. The patients' care pathway was collected according to the reason for delay in care (reasons for delaying the consultation with the specialist) with different possible modalities:

- Sense of not being ill;
- Fear of treatment side effects;
- Fear of stigmatisation;
- Doubt about the effectiveness of the treatment;
- refusal to consult a specialist;
- the need to stop drinking alcohol;
- the feeling of being treated with other useful drugs and lack of financial means.

First use of care, previous treatment and treatment regimen were sought with these modalities:

- Traditional or modern medicine,
- Appropriate and inappropriate treatment.

Data were analysed using SPSS software version 21.0.

Continuous variables were expressed as mean and standard deviation, while categorical variables were expressed as percentage.

The study was approved by the Ethics Committee of Donka National Hospital in accordance with the Declaration of Helsinki

3. Results

Out of 5400 patients received during the study period, 393 had viral hepatitis, including 384 cases of hepatitis B and 9 cases of hepatitis C.

The socio-demographic characteristics are summarised in Table 1. The mean age of our patients was 35 ± 10 years, with extremes of 16 - 77 years. The sex ratio was 2.5 with a male predominance in 282 cases. Almost two thirds of the patients were employed (79.9%) and married in 65.6%. Incidental discovery was the dominant circumstance (77.8%).

Three hundred and forty-two patients (87%) had recourse to modern medicine, of whom 286 patients (83.6%) had consulted a public facility and 56 patients (16.3%) had consulted a private facility. These results are illustrated in Figure 1.

One hundred and twenty-five patients (31.8%) had received previous treatment, of which more than half (57.6%) had received inappropriate treatment. The delay in treatment was: less than one month in 176 cases (44.8%), less than three months in 35 cases (8.9%), between 3 and 6 months in 5 cases (1.3%) and more than six months in 177 cases (45%); as shown in Table 2. The acquisition of inappropriate prior treatment was observed in 31.8% of cases. Furthermore,

57.6% had received Dimethyl Dimethoxy Bipheny Dicarbonate - Silymarin (Mepacure) and 42.4% had received interferon per os (Immunoplex N) as treatment for their viral hepatitis.

Table 1. Sociodemographic characteristics.

Socio-demographic characteristics	Number (N = 393)	Proportion %
Sex		
Male	282	71.8
Female	111	28.2
Sex-ratio (H/F) = 2.5		
Age group		
15 - 25	71	18.1
26 - 35	159	40.2
36 - 45	107	27.2
over 45	56	14.2
Mean age = 35 ± 10 years; extremes 16 - 77 years		
Occupation		
Civil servant	196	49.9
Self-employed	86	21.9
Pupil/Student	46	11.7
Housewife	33	8.4
Worker	32	8.1
Level of education		
Not in school	76	19.3
Elementary	23	5.9
Secondary	91	23.2
Supérior	199	50.6

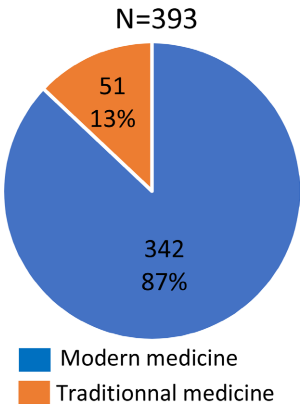

Figure 1. Use of healthcare.

Table 2. Distribution of HBV/HCV patients by time to care.

Variable	Characteristic (N = 393)	Proportion (%)
<1 mouth	176	44.8
<3 moutn	35	8.9
3 - 6 mouth	5	1.3
>6 mouth	177	45.0
Total	393	100.0

Table 3. Reasons for the delay in care.

Variables	Characteristic (N = 177)	Proportion (%)
Feeling of not being ill	53	29.9
Fear of being stigmatised	2	1.1
Fear of side effects	1	0.6
Unaware of the need to consult a specialist	59	33. 3
Feeling that they are being treated by useful drugs	43	24.3
Diagnostic wandering	13	7.3
Lack of means	6	3.4
Total	177	100.0

The main reasons for delaying treatment were the feeling of not being ill in 53 cases (29.9%), not knowing to consult a specialist in 59 cases (33.3%) and the feeling of being treated with useful drugs in 43 cases (24.3%). These results are detailed in Table 3.

4. Discussion

The hypothesis of this study was to identify the pathway of patients seeking adequate care and the impact this may have. Thus, out of a total of 5,400 patients seen in the Internal Medicine Department, 393 were suffering from viral hepatitis B or C, *i.e.* a hospital frequency of 7.3%. Compared to hospital data in the literature, it should be mentioned that our results are close to the 8% to 15% prevalence reported in the West or Central African population [9] [10] [11] [12] [13]. Furthermore, hepatitis C remains low with a frequency of 0.2%; contrary to the data in the African literature, whose prevalence varies from 1 to 11% [13]. This difference can be explained in our context by an underestimation linked to the high cost of diagnosis, particularly of hepatitis C markers (estimated at 100 euros) and the low socio-economic level of our population (guaranteed minimum wage of 55 euros).

There was a predominance of men (71.8%) with a sex ratio (M/F) of 2.5. These results are in line with the data in the literature according to which men

are more exposed to viral hepatitis B and C [14] [15] [16] [17]. This is due to the difference in immune response to infection, but also to the lifestyle of men who are more exposed to risk factors. The average age of the patients was 35 ± 10 years with extremes from 16 to 77 years. The socio-professional stratum most affected was civil servants with 49.9% and a higher level of education (50.6%). In fact, this category is more accessible to awareness-raising messages on viral hepatitis and is therefore more motivated to go to a health facility in search of care.

Although the first line of care was modern medicine and mainly in public facilities, patients were receiving inappropriate treatment that was not in line with the standards and procedures established in Guinea for the management of viral hepatitis. In addition, the patients received treatment within a longer period of time. These results are similar to those of Kodjo *et al.* [18] in Benin, who reported an attendance rate of 75 cases (73.5%) in public and private health facilities, and contrary to Dolorés and Enes [4], in Côte d'Ivoire, who in their study found that the therapeutic pathways combined alternative remedies such as family pharmacopoeia, traditional or naturopathic practitioners, and phytotherapy, with a false hope of recovery. Although there is a hepatitis management unit created in 2018, it should be noted that it still does not have its own funding. This hinders the implementation of therapeutic education programmes (information, education and communication), the availability of antiretroviral drugs active against hepatitis (to date only Tenofovir disoproxil fumarate is available in Guinea), the diagnostic package (HBV DNA, HCV RNA, non-invasive fibrosis markers, liver biopsy) and the lack of ongoing training for providers on the management of viral hepatitis.

The long delay of the management could be related to the low standard of living of our population and the lack of qualified human resources (the whole country has only 5 specialists in hepato-gastrology for more than 13.13 million people).

During data collection, we were confronted with certain difficulties in reaching patients by telephone. Moreover, the limitation of our study was the lack of precision of the specialty of the providers who managed our patients; but also the lack of evaluation of the cost of the management in its entirety

5. Conclusions

The majorities of patients are young and seek appropriate care late in life. Primary care is still dominated by modern medicine with inappropriate care being administered.

The lack of training of general practitioners in the management of viral hepatitis and the scarcity of awareness campaigns on viral hepatitis have contributed to the inadequacy of management.

Thus, the reinforcement of therapeutic education and systematic screening of all patients could contribute to shortening the delay and improving the management of patients.

Authors' Contributions

- Kadiatou Diallo coordinated the study, developed the protocol, collected the data, participated in the data analysis, structured and wrote the article (editor).
- Fatoumata Diaraye Barry collected the data, revised the article and provided critiques to improve the content.
- Thierno Saidou Diallo developed the protocol, collected the data, participated in the data analysis, structured and wrote the article.
- Djenabou Diallo participated in the development of the protocol, analysed the data, and participated in the structuring and writing of the article.
- Mamadou Sarifou Diallo, Salifou Mariétou Sylla, Ousmane Sow, Leno Nestor Niouma participated in the elaboration of the protocol, reviewed the article and provided criticism to improve the content of the article.
- Alpha Amadou Sank Diallo, Djibril Sylla and Thierno Mamadou Tounkara reviewed the article and provided critiques to improve the content

Conflicts of Interest

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

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