Awareness, knowledge and Adherence to Hepatitis B Virus Infection,Testing and Vaccination among Sickle cell Disease Patients

Comment [h1]: Rewrite It. It Gives other meaning. AS [**Awareness, knowledge, Adherence to Hepatitis B Virus InfectionTesting and Vaccination among Sickle cell Disease Patients**

ABSTRACT

Comment [h2]: Add your objective

Background: Sickle cell anemia patients are a cohort of at-risk individuals for Hepatitis B virus infection due to their life-long dependency on transfusion therapy. The World Health Organization (WHO) recommendations stipulates testing and vaccination for at-risk individuals. The present study was aimed at assessing the awareness, knowledgeand adherence to Hepatitis B virus infection, testing and vaccination among sickle cell disease patients in Enugu, South East, Nigeria.

Materials and Methods: This was a descriptive cross-sectional study. The subjects comprised of 120 sickle cell disease patients who were recruited through consecutive sampling using pretested, semi-structured, self-administered questionnaires and analyzed and data was analyzed with statistical package for social sciences (SPSS) for Microsoft Window Version 23.

Comment [h3]: Rewrite it

Results: The mean age of the respondents was 24 ±6 years. About 57.5% of the respondents are aware of Hepatitis B virus infection but only 15% had good knowledge of the disease. About 80.8% of the respondents have not been tested for Hepatitis B infection while 70% has not been vaccinated. Majority of the respondents (80%) has not been tested due to high cost of testing while (84.2%) has not been vaccinated due to high cost of the vaccine.

Comment [h4]: Rewrite

Conclusion: There should be universal health education to sickle cell anemia patients on the need for Hepatitis B virus infection test and vaccination as well as a health insurance scheme that will cover the cost of Hepatitis B virus testing and vaccination for patients.

Keywords: Awareness, Knowledge, Adherence, Hepatitis B Virus Infection, Hepatitis B test, Hepatitis B vaccine, Sickle cell anemia, Enugu.

INTRODUCTION

Hepatitis B Virus (HBV) infection is a public health problem especially in Sub-saharan Africa. Despite the World Health Organization (WHO) targets for the eradication of Hepatitis B as a public health problem by 2030, death attributable to Viral Hepatitis has continued to increase over the past decades with sub-Saharan Africa accounting for 20-30% of persons living with Hepatitis B Infection(1). Hepatitis B virus is a common transfusion transmitted infection and

among the most frequent complications in individuals with Sickle Cell Disease (SCD) due to their life-long dependent on transfusion therapy and uncertainties in donor blood testing procedures(2,3).

In other to prevent infection, most transfusion centre's apply the Enzyme Linked Immunosorbent Assay (ELISA) test for HBV detection during donor screening, yet cases of post-transfusion Hepatitis infection has been reported indicating that ELISA test is not entirely effective(4). The highly recommended and more reliable Nucleic Acid tests such as Polymerase Chain Reaction (PCR) tests are costly and currently not a routine test for donor blood in low-income resource countries such as the Sub-saharan Africa. The WHO recommendations stipulates testing and vaccination for at-risk individuals such as Sickle Cell Disease patients(5). Good awareness and positive attitude towards HBV infection, testing and vaccination by the public particularly by at-risk individuals are key to its eradication. The present study was designed to ascertain the level of awareness, knowledge and attitude to HBV testing and vaccination among a cohort of Sickle Cell Disease individuals in Enugu, South East, Nigeria.

MATERIALS AND METHODS

Descriptive cross-sectional design was adopted for the study. The study subjects comprised Sickle Cell Disease patients who were recruited using consecutive sampling technique. A minimum sample size of 78 respondents was calculated using the formula: $n = Z^2pq/d^2$.However, to allow for 10% non-response rate, a sample size of 120 respondents was used. Ethical approval was obtained from the research and Ethics Committee (REC) of the Enugu State Ministry of Health. Data was collected using a pretested, semi-structured, self-administered questionnaires and analyzed using the Statistical Package for Social Sciences (SPSS) for Microsoft Window Version 23. Data collection lasted for six months (February to July, 2022).

RESULTS

Table 1 showed that the mean age of the respondents was 24 $\pm$ 6 years, 55.8% females and 44.2% males. Sixty one point seven percent (61.7%) of the respondents were within the age range of 18-25 which forms the majority and are mostly students in secondary schools (32.5%) or tertiary institutions (45%).

Comment [h5]:
Where is your Objective before this Topic?
Is very short and not address scientific steps of the research methodology. Manymethods left. And put briefly your sample size calculation with where you got P-value. Please adhere with the standard steps of Research methods. Even there is no operational definition to measure your variables.
How you measure knowledge and Level of adherence. How many questions you use for awareness, knowledge and adherence.

Comment [h6]: Institutional or community based?Add it.

Comment [h7]: Your result is very narrow as compred with Topic.

Table 2 showed that majority of the respondents (57.5%) knows about Hepatitis B infection but only 14.2% knew that Hepatitis B is a DNA virus while only 15% know about the modes of transmission of the disease. The mass media and church formed the major source of awareness and knowledge about Hepatitis B virus infection, testing and vaccination among the respondents with 39.2% and 29.2% respectively.

Table 3 showed that majority of the respondents 80.8% has not been tested for Hepatitis B infection while 70% has not been vaccinated. About 80% of the respondents have not been tested due to high cost of the testing while 20% has not been tested due to poor attitude to testing. About 84.2% has not been vaccinated due to high cost of the vaccine while 15.8% has not been vaccinated due to poor attitude to vaccination.

Table 1: Socio-demographic characteristics of the respondents (n = 120)

S/N	Variable	Frequency	Percentage
1	**Age group (years)**		
	18 – 25	74	61.7
	26 – 32	31	25.8
	33 – 40		
	40 and above	9	7.5
	Mean age (24 $\pm$ 6 years)	6	5.0
2	**Gender**		
	Male	53	44.2
	Female	67	55.8
3	**Educational Level**		
	Elementary	17	14.2
	Secondary	39	32.5
	Tertiary	54	45.0
	Not educated	10	8.3
4	**Occupation**		
	Students	74	61.7
	Civil servants	22	18.3
	Traders and artisans	24	20

Table 2: Awareness and Knowledge of Hepatitis B infection

S/N	Variable	Frequency	Percentage
1	Do you know about Hepatitis B Infection		

	Yes	51	42.5
	No	69	57.5
2	Hepatitis B is a DNA virus		
	Yes	17	14.2
	No	2	1.7
	Do not know	101	84.2
3	Blood transfusion, body fluid contact, sexual intercourse, mother-to-child contact are modes of HBV infection transmission		15
	Yes	18	85
	Do not know	102	
4	What is your source of information about HBV infection?		
	School	16	13.3
	Church	35	29.2
	Mass media	47	39.2
	Social media	22	18.3

Table 3: Attitude towards Hepatitis B testing and Vaccination

S/N	Variable	Frequency	Percentage
1	Have you been tested for HBV infection?		

	Yes	23	19.2
	No	97	80.8
2	If no, why?		
	Cost of testing is high	96	80.0
	Too busy or do not remember	24	20
3	Have you been vaccinated against HBV infection?		
	Yes	36	30
	No	84	70
4	If no, why?		
	Cost of vaccine is high	101	84.2
	Too busy or do not remember	19	15.8

DISCUSSION

Comment [h8]: Your discussion seems alike qualitative research due your methodology gap. No level of awareness measured, Level of knowledge with confidence interval, level of adherence with confidence interval. Even though you. This is not the character of quantitative research discussion. Make it mature enough

Awareness and knowledge assessment in this study showed that a significantly high proportion of the respondents were aware of Hepatitis B infection but only few among them had good knowledge of the disease. This may be due to lack of educational programs on Hepatitis B in the schools as majority of the respondents were students in secondary and tertiary institutions of learning who rather got their information about the virus from either the church or mass media. This finding is at variance with similar study done at Abakaliki, Nigeria(5) which may be due to the fact that the study done at Abakaliki were carried out on respondents who were medical students in which case studies on infectious disease forms part of their curriculum in school. This implies that there is a low universal coverage on sensitization about Hepatitis B infection with regards to health educational programs in schools. Majority of the respondents had neither not been tested nor vaccinated for Hepatitis B infection which was identified to be due to mainly high cost of testing or high cost of the vaccine. This may be because majority of the respondents are students who are dependants, artisans, traders or only employed on menial jobs and might not be able to afford the cost of the testing or vaccination. These findings of low level of testing and vaccination due to cost obtained in the present study is similar to a study carried out at Port-Harcourt, Nigeria(6). Inadequate knowledge of Hepatitis B infection as well as high cost of testing and vaccination may reflect poor attitude of respondents to testing and vaccination(7). The present study also revealed that the majority of the respondents got their knowledge and

awareness of Hepatitis B infection through either the church or mass media. This shows that the church and other religious organizations as well as the mass media are veritable platforms for health education of the populace.

CONCLUSION

Universal health education and subsidization of the cost of testing and vaccine may help reduce the infection rate of Hepatitis B virus among sickle cell disease patients. We recommend routine health education for Hepatitis B infection as well as health insurance schemes for vulnerable cohorts such as sickle cell disease patients.

Comment [h9]: How you recommend this insurance? Modify your recommendation based on your findings.

REFERENCES

Comment [h10]: The reference is so limited. Try to over all documents.

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