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ADHERENCE TO NATIONAL HEPATTIS B MANAGEMENT GUIDELINES AMONG HEALTHCARE PROVIDERS IN KIGALI HOSPITALS

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ABSTRACT

Background-Hepatitis B is a viral infection which attacks the liver and can cause both acute and chronic disease. The estimated number of people living with hepatitis B virus is 257 million people globally. Hepatitis B resulted in 887 000 deaths in 2015, our study comprehensively evaluated adherence to Hepatitis B management guidelines among healthcare providers.

Methods-The study is a descriptive research and retrospective cross sectional study design was employed. Convenience sampling was used to select hospitals in Kigali based on high numbers of chronic Hepatitis B patients. Quantitative approach was used. Data was collected from patient files.

Results-Findings shows thatAPRI test was done on 26% and imaging test was done on 32.8%. Adherence to treatment and follow-up findings shows that majority of patients with high ALT, high APRI score were not well managed only 14% and 8% respectively were well managed while HIV-HBV co-infected were 33% that got the right treatment and the follow-up of patients was only on 26%.Multivariate analysis found that health care providers from Masaka had an association with good adherence and experience of health care providers had a an association where those with 1 year of experience were 5 times likely to follow the guideline than those with 6 years.

Conclusion- following the guideline is very important in quality of health care therefore, greater efforts to meet physician knowledge gaps, incorporation of decision, support tools, and improved communication among providers are needed.

INTRODUCTION

Chronic hepatitis B (CHB) affects 240 million people worldwide and kills around 700 000 peopleannually through the complications of hepatocellular carcinoma (HCC) and cirrhosis, predominantly in low-and middle-income [1]. Rwanda Ministry of Health has identified viral hepatitis as a serious public health problem where at least 200,000 Rwanda are estimated to be living with Hepatitis B, and about 50,000 of the i.e 25% are likely to die of liver cancer due to infection[7]. high risk population are screened hepatitis B through campaigns which is done by the ministry of health through Rwanda Biomedical Centre (RBC) in all parts of the country[11]. However the researcher reported that the people who were diagnosed HBV positive are poorly followed up to be tested for the HBV viral load and delayed treatmen. The WHO guideline recommends that as a priority, all adults, adolescents and children with CHB and clinical evidence of compasate or decompasate cirrhosis (based on APRI score>2 in adults) should be treated, regardless of ALT levels, HBe Ag status or HBV DNA levels. Treatment is recommended for adults with CHB who do not have clinical evidence of cirrhosis (based on APRI score≤2 in adults) but are aged more than 30 years in particular and have persistently abnormal ALT levels and evidence of high level HBV replication (HBV DNA>20,000 in/mL) regardless of HBe Ag status. In HBV/HIV co-infected people on ART should be initiated in all those with evidence of severe chronic liver disease, regardless of CD4 count and in all those with CD4 count < =500 cells/mm3, regardless of stage of liver diseaseS.

We used patient files to assess how health care providers adhere to Hepatitis B management guidelines in Kigali, Rwanda the goal of our study was to improve the current gap in cascade of care on hepatitis B.

METHODS

STUDY DESIGN, SITE AND POPULATION

Retrospective cross sectional study design was employed to collect data from patient files. The study used**QUANTITATIVE** approach**, THE** study area was the Capital City of Rwanda**.** The target population included all people who were screened and tested Hepatitis B positive from 2015-2019. Each patient file was reviewed and convenient sampling was used to select hospitals. Masaka, Kibagabaga and CHUK were selected because they had big numbers of patients with chronic Hepatitis B, The researcher used a patient data extraction tool to collect information from the patient medical file each patient file including test result, imaging results, liver biopsies, and clinic notes were analyzed in detail by two independent reviewers to ensure accuracy. The researcher received ethical clearance from Mount Kenya University.

Study procedures

After authorization from Mount Kenya University, the researcher contacted the selected hospitals (Masaka DH, KibagabagaDH and CHUK) to request permission to conduct the study on their patients, the researcher and research assistant explained the importance of research and how to proceed. Approval from the appropriate authorities was received, the researcher conducted the study and the patient data extraction tool reviewed with accuracy and for completeness.

Statistical Analysis

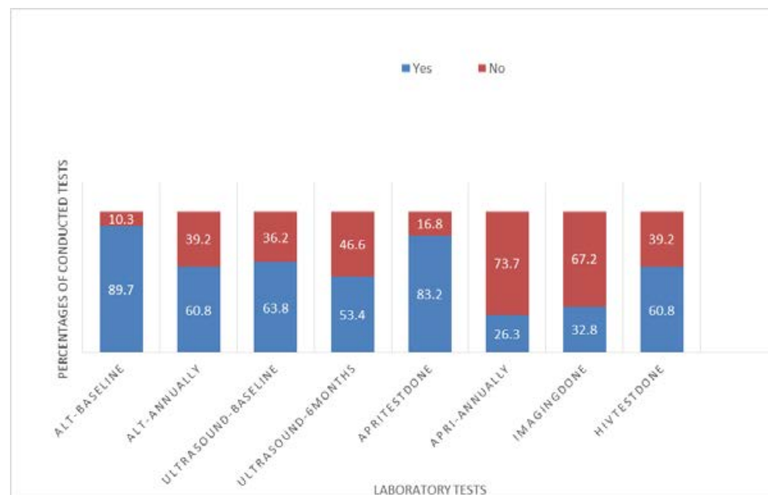
The data was analyzed by using statistical package social science (SPSS) version 20. Descriptive analysis was computed whereby, Pearson's chi square test and odds ratio with corresponding 95% confidence interval was computed to establish the association between the dependent variable and independent variable. All significant variables from bivariate analysis at a p-value of 0.001 were entered in multivariate model using binary logistic regression to control confounding. Moreover the adherence to national Hepatitis B national guideline among patients in hospitals was determined by calcu

lating the total score of patient based on the care and treatment given where the total was 21 scores (low score was from 1-16 and high score was from 17-21) .

Results

The adherence on timeliness of hepatitis B diagnosis guideline by healthcare providers in selected Kigali hospitals.

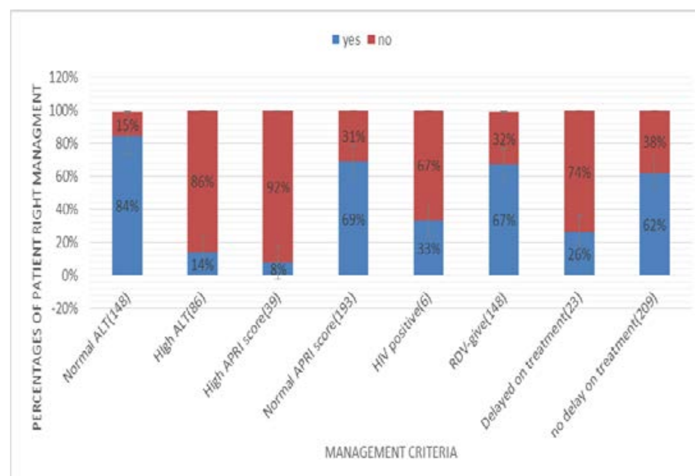
The total number of patient files were 232 and figure (4:1) shows the majority of percentages of which laboratory tests were done for each patient timely as per the national guideline recommends, However APRI test annually and imaging test at baseline were done to only 26.3% and 32.8% of the patients respectively.



The adherence on timeliness of hepatitis B diagnosis guideline by healthcare providers in selected Kigali hospitals (Figure 4.1)

Adherence to Hepatitis B treatment and follow up guideline of patients in selected Kigali Hospitals

Majority of patients with high ALT84% did not receive the right management.Patients with high APRI score only 8% received the right management as recommended by guideline. Majority of patients with HIV did not receive right management 67% and a third of patients who delayed on treatment 74% did not receive the right management.



Adherence to Hepatitis B treatment and follow up guideline of patients in selected Kigali Hospitals (Figure4.2).

Factors that are associated with good adherence to national hepatitis B management guideline.

The results that were calculated in multivariate analysis where health care providers from kibagabaga had p.value (<0.001) which indicates that they follow the guideline than other hospitals and health care providers with 1 year of experience were 5 times likely on adherence to guideline compared to others with 6 years of experience. However Type of health care providers and their level had no association in adherence to national guideline of Hepatitis B management.

Discussion

Our study found a remarkably high rate of missed imaging, of which were due to physician non-adherence across all physician types. The total number of patient files were 232 and findings shows that majority of percentages of which laboratory tests were done for each patient timely as per the national guideline recommends, However APRI test annually and imaging test at baseline werecompared to a large cohort study [12] patients with a median of 6 years of follow-up within integrated healthcare organizations in the United States during 2006–2013 were assessed and findings found that CHB patients had suboptimal clinical monitoring and, accordingly, insufficient data to determine disease phase and antiviral treatment eligibility. This study also found that a half of patients with cirrhosis never had a hepatic imaging study during follow-up. According to these similar studies there are multiple barriers to liver imaging in clinical practice, and many clinicians have understandable justifications for not ordering liver images.

Majority of patients with normal ALT received the right treatment, majority of patients with high APRI score did not receive the right management as recommended by guideline, and Patients with Normal APRI score majority of them underwent the right treatment while high number of patients with HIV did not receive right management. Patients who were on follow up more than a half received the right treatment and a third of patients who delayed on treatment initiation did not receive the right management. Compared to this Study that was conducted in Australia The findings from this study estimated that in many of Australians who are living with CHB, more than a half had been diagnosed, however small number of people received recommended viral load testing (without treatment). Compared to findings of these studies that was conducted in Australia and USA are in the same line with the current study where there some gap in the cascade of care. Health care providers do not expertise in treating Hepatitis B because it is still very new in Rwanda and some clinical materials and medicines were still a problem to access them in last five years which may contribute to reason as the health care providers did not adhere to guideline. More extra efforts is still needed to address the issue of enough equipements and medications.

The results from this in multivariate analysis shows the results that were calculated in multivariate analysis where kibagabaga had good adherence compared to other hospitals and association. Hospitals and experience had association in multivariate analysis. [16], findings found that Forty-five percent did not have timely hepatocellular carcinoma screening, although gastroenterology physicians (specialists) had the highest odds of adherence compared to nurses, patients seen by gastroenterologists had twice the odds compared with primary care physicians of undergoing timely lab monitoring. Therefore are in line with the current study which indicates that medical doctors follow the guideline than nurses, medical doctors do all lab tests and write the appointments in patient file while nurses do ignore giving appointments for follow up. Nurses still miss some gap in cascade of care therefore more trainings are needed and more experiences.

Conclusion

This study analysis demonstrates that majority of patients living with Chronic Hepatitis B are not being followed up, and they remain at risk of complications, as they are not receiving guideline-based care. Greater efforts to meet physician knowledge gaps, incorporation of decision support tools, and improved communication between providers regarding the status of shared patients are essential for improvement of overall outcomes for CHB.This must urgently be addressed in the program health system.

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