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**Clinical Audit of Non-Selective Beta Blockers Titration in the Management of Portal Hypertension at a National Hospital in Tanzania**

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**Abstract**

**Background**: Portal hypertension – a major complication of chronic liver disease – is associated with multiple complications that include ascites, varices, and hepatic encephalopathy; these complications can lead to substantial morbidity and mortality. Randomized control trials have demonstrated the efficacy of nonselective beta blockers (NSBB) for preventing primary and secondary gastro esophageal variceal bleeding. These drugs should be titrated to target the resting heart rate of 55–60 beats per minute and the systolic blood pressure should not decrease <90 mm Hg. The objective of this study was to perform an audit of the titration of nonselective beta blockers in patients with portal hypertension at the national referral hospital.

**Methods**: The audit involved all adults aged 18 years and above with portal hypertension and evidence of esophageal varices who were regularly attending gastroenterology and hepatology clinics of Muhimbili National Hospital between January 2019 and December 2019. The patients’ clinical data were extracted from the electronic medical records. Permission to conduct the study was obtained from the hospital management.

**Results:** Over the audit period, a total of 151 patients with esophageal varices who attended gastroenterology and hepatology clinics were included. The mean age of the patients was 42.4 years and males accounted for 61% of the cohort. About 90% (136/151) of patients attended the clinic more than three times; 92% (139/151) had an unchanged dose of NSBB for at least two consecutive visits and 60.2% (91/151) were admitted in subsequent visits due to variceal bleeding. Critically, the records showed that 100% of patients did not have their pulse rate and blood pressure recorded.

**Conclusion**: The audit results indicated a low rate of titration of NSBB and poor recording of pulse pressure and blood pressure. It was recommended that NSBB should be appropriately titrated with corresponding precautions taken and the patients’ systolic blood pressures and pulse rates should be recorded.

**Keywords**: *esophageal varices, periportal fibrosis, cirrhosis*