ABSTRACT

BACKGROUND: Secondary Peritonitis is one of the most common surgical emergencies with significant morbidity and mortality. Multiple scoring systems have been proposed and assessed in predicting the outcome in patients with peritonitis. Among them is the Mannheim Peritonitis Index (MPI). MPI is a Simple and Specific Scoring System for predicting outcomes in patients with Secondary Peritonitis. Increasing scores are associated with a poorer prognosis and need for intensive care management. The aim of this study was to predict the outcomes of secondary peritonitis using MPI and also determine the Sensitivity and Specificity of MPI at Mbarara Regional Referral Hospital (MRRH).

METHODS: This was a Prospective Cohort Study involving patients with Secondary Peritonitis admitted at MRRH over a six-month period between 1st May 2023 and 31st October 2023. Patients were enrolled in the study after signing an informed consent. A pre-tested questionnaire was filled for all Patients registered during the study period. Socio-demographic, clinical, paraclinical, management and outcome were recorded and analysed using epidata, Microsoft Excel and STATA software programs. Pearson's Chi-square and Fischer's Exact test was used as a Statistical test and considered as showing a significant difference if $p < 0.05$.

RESULTS: A total of 100 patients with Secondary Peritonitis were studied (63male, 37 females). Overall, the MPI had a Sensitivity of 79% (95% CI:68.5-87.3%) and Specificity of 78.9% (95% CI:54.4-93.9%) with a PPV 94.1% (95% CI:85.6%- 98.4%) and NPV 46.9% (95%CI:29.1%-65.3%), at MPI cut-off point of 21.

No mortality was recorded at MPI<29 however, 7.5% mortality was recorded at MPI >29points. Overall mortality rate was 3%. MPI predicted length of hospital stay in Bivariate Analysis (p value<0.001) and lost its Predictive Power in Multivariate Analysis (p values for moderate risk and high risk 0.300 and 0.211 respectively).

CONCLUSIONS: At MRRH, MPI was a good predictor of post-operative complications among patients with Secondary Peritonitis however, it did not predict Mortality and Length of Hospital Stay.