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Fasting Plasma Glucose and COVID-19 prognostication: A single centre study.

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Introduction In COVID_19 patients, hyperglycaemia is associated with poorer outcomes. A fasting plasma glucose (FPG) of $>/= 7.0$ mmol/l is an independent predictor of 28-day mortality.

Objectives Study the effect of SARS-CoV-2 infection on fasting plasma glucose (FPG) in adults above 18 years who presented with rt-PCR or RAT positive COVID-19 infection and the role of FPG in prognostication.

Methodology A retrospective case notes-based descriptive study including rt-PCR or RAT positive COVID-19 patients over the age of 18 years was carried out. This study was conducted from July 2021 to October 2021 among patients admitted to the COVID treatment centre, Teaching Hospital Batticaloa, Sri Lanka. The primary outcome measure was the severity of the disease on admission and the secondary was death. Those with a diagnosis of diabetes mellitus (DM) or on treatment for DM were excluded from the analysis. The correlation between FPG and the primary and secondary outcomes was analysed using standard statistical software. The cut-off value for FPG was 5.6mmol/l.

Results Among the 98 patients admitted, 51 were excluded due to DM, and 47 were included in the analysis. Thirty-four percent of participants were 60 years or above and 83% were females. FPG was suboptimal (> 5.6 mmol/l) in 61.7%; mean FPG was 6.634 +/- 2.221 mmol/l. Correlation (ANOVA) between FPG and COVID severity and death was not significant. The mean FPG of the 2 death was 8.3 +/- 0.707 mmol/l.

Conclusion Fasting plasma glucose was raised in a significant proportion of patients but was not related to the severity of the infection or death due to COVID. The small sample size may have skewed the correlation between the severity and outcomes.