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## THE IMPACT OF DIABETES MELLITUS AND OBESITY ON CLINICAL OUTCOMES OF HOSPITALISED PATIENTS WITH COVID-19 INFECTION

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**INTRODUCTION**
Obesity and diabetes mellitus are often regarded as risk factors for poorer outcomes in various infections. This study was conducted to determine the impact of diabetes mellitus and obesity on clinical outcome of COVID-19 infected patients.

**METHODOLOGY**
A prospective study was conducted from April 2021 to October 2021 among patients aged >18 years, admitted to Hospital Sarikei with confirmed SARS-CoV-2 infection stratified as categories 4 and 5. Pregnant women and patients with existing lung pathology were excluded. Demographic data, comorbidities, BMI, and clinical outcome parameters such as number of days on oxygen supplementation, need for mechanical ventilation and mortality were recorded.

**RESULTS**
A total of 458 patients were included, mean age was 61.6 ± 14.2 years and 231 (50.4%) participants were male. Almost half, 211 (46.1%) were diabetics and 165 (36.0%) were found to be obese.

Diabetic patients were on oxygen supplementation for a mean duration of 7.30 ± 5.63 days, significantly longer than nondiabetic patients with a mean duration 6.01 ± 4.90 days, $p$=0.009. There was no significant difference in number of days on oxygen between obese and non-obese patients.

A higher proportion of obese patients were mechanically ventilated, 38.2% vs 25.3% non-obese patients, $p$=0.004. There was no increase in mechanical ventilation among diabetic patients.

The rate of mortality in the obese group was also significantly higher than non-obese patients, 23.0% vs 12.6% respectively, $p$=0.009. The mortality rate among diabetics was not significantly different from that of nondiabetics.

**CONCLUSION**
Diabetic patients required oxygen supplementation for a significantly longer duration than nondiabetics. The rates of mechanical ventilation and mortality were significantly higher among obese patients compared to non-obese patients. These findings suggest that vigilant monitoring and better management for obese and diabetic patients with COVID-19 infection are important to improve clinical outcome.