

Letter: Diabesity Associates with Poor COVID-19 Outcomes among Hospitalized Patients (J Obes Metab Syndr 2021;30:149-54)

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Both diabetes and obesity are related to poor health outcomes of coronavirus disease 2019 (COVID-19). Approximately half of COVID-19 mortalities involved individuals with metabolic and vascular disorders.¹ Therefore, special attention should be paid to this population. A previous meta-analysis² including 24 cohort studies showed that odds ratios (ORs) of obesity for intensive care unit admission and invasive mechanical ventilation were 1.21 and 2.05, respectively. However, since obesity and diabetes are inter-related conditions, the effects of diabetes cannot be eliminated when analyzing the impact of obesity in data including both diabetic and non-diabetic subjects.

Nikniaz et al.³ reported useful findings in a paper entitled “Diabesity associates with poor COVID-19 outcomes among hospitalized patients,” which was based on their prospective hospital-based registry of COVID-19 patients in East Azerbaijan, the Iranian province with the highest prevalence of obesity (over 26.3%).⁴ This study analyzed data from subjects who were diagnosed with diabetes prior to COVID-19. They showed that obesity (body mass index [BMI] ≥ 30 kg/m²) is a significant risk factor for death (adjusted OR, 2.72), mechanical ventilation (1.87), and intensive care

unit admission (2.41) after adjusting for age, sex, smoking status, and comorbidities. However, confounding factors still exist regarding the severity of diabetes. They obtained fasting blood glucose levels and prescription data for insulin and non-insulin therapies. Duration of diabetes, glycosylated hemoglobin level, and diabetic vascular complications should be assessed when categorizing the severity of diabetes. Furthermore, we need to consider the effects of antidiabetic medications. For example, recent national data from Korea demonstrated that the use of dipeptidyl peptidase-4 inhibitor was significantly associated with better clinical outcomes of COVID-19.⁵ Therefore, further detailed analysis adjusting for diabetes status is necessary to determine a direct association between obesity and COVID-19 outcomes.

A higher degree of obesity was related to higher all-cause mortality among individuals with type 2 diabetes.⁶ During hospitalization for COVID-19, mortality was greater in severe obesity (BMI ≥ 40 kg/m²) even compared to subjects with BMI of 35–39.9 kg/m².⁷ This dose-dependent association between obesity and various outcomes of COVID-19 needs to be confirmed in subjects with diabetes and obesity. In addition, multi-ethnic group

studies would give us more concrete data regarding the impact of obesity on health outcomes of COVID-19 and the generalizability of these findings across various populations.

CONFLICTS OF INTEREST

The author declares no conflict of interest.

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