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Editorial comment

Comment on: Prior bariatric surgery in COVID-19 positive patients may be protective

In this issue of *Surgery of Obesity and Related Diseases*, the manuscript titled “Prior Bariatric Surgery in COVID-19–Positive Patients May Be Protective” by Jenkins et al. reports a retrospective review of patients utilizing a COVID-19 database from a single New York City–based academic institution that compared 2 groups: a bariatric surgery group (n = 124) and a control group composed of patients eligible for bariatric surgery [1]. The bariatric surgery group included patients who underwent Roux-en-Y gastric bypass (n = 45; 36%), laparoscopic sleeve gastrectomy (n = 35; 28%), and laparoscopic adjustable gastric banding (n = 44; 35%). The 2 groups were compared in terms of mechanical ventilation requirements, hospital deaths, intensive care unit (ICU) stay, and hospital length of stay. The bariatric group had a significantly lower body mass index (BMI) of 36.1 kg/m² (standard deviation: 8.3) compared with 41.4 kg/m² (standard deviation: 6.5) in the control group. Patients in the bariatric group were less likely to be admitted, less likely to require mechanical ventilation, and had shorter ICU stay and hospital length of stay ($P < .05$). After adjusting for BMI and obesity-related comorbidities, patients with a history of bariatric surgery had a significant decrease in the risk of emergency department admissions.

Novel coronavirus disease, COVID-19, caused by severe acute respiratory syndrome coronavirus-2, is highly virulent virus, which has caused an unprecedented global crisis. Since the pandemic began, obesity and impaired metabolic health have emerged as leading risk factors for worse outcomes associated with COVID-19 infection [2–5]. A recent meta-analysis demonstrated that patients with obesity (BMI ≥ 30 kg/m²) were at a 46% higher risk of developing COVID-19, were 113% more likely to be hospitalized, and were at a 74% higher risk for ICU admission and a 48% higher risk of death [6]. As of 2019, the Centers for Disease Control and Prevention reports that 31.4% and 15.5% of US adults and adolescents, respectively, are considered obese in the United States [7]. Thus, it seems vital to create strategies to combat obesity, which is already associated with many other chronic and debilitating conditions.

With another wave of COVID-19 infections on the rise, many institutions are postponing nonemergent surgical

procedures. As bariatric surgery has been widely established as the most effective and durable treatment for severe obesity and as the evidence grows of the association between BMI and worse outcomes, the question remains: Should bariatric surgery be considered an elective procedure?

This pandemic has highlighted the vulnerabilities of patients with obesity and the necessity of creating better strategies for the management of this chronic but modifiable disease process. The study by Jenkins et al. [1] adds to the growing evidence that bariatric/metabolic surgery is associated with improved outcomes and decreasing severity of COVID-19 infections in the population with obesity [8]. The mechanism through which surgery leads to decreased worse outcomes is not completely elucidated. Perhaps the anti-inflammatory effects of surgery counteracts the proinflammatory state of the COVID-19 infection, as surgery leads to a reduction in excessive adipose tissue, in addition to improving some of the obesity-related co-morbidities. Based on these data, the American Society of Metabolic and Bariatric surgery argues that by addressing obesity in the country in an expeditious manner, metabolic surgery can be a life-saving procedure, and given its substantial benefits, it should be considered an essential surgery rather than an elective procedure [9].

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