Demographics of COVID 19 admitted patients and obesity: a retrospective study

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**Background and Aims**

An outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), causing the coronavirus disease 2019 (COVID-19), started in December 2019. Almost a year later, we seem to be at the brink of an imminent second wave. Since it was declared a pandemic by the World Health Organization (WHO) in March 2020, it infected more than 153 million people and led to the death of 3.3 million others. It is estimated that people with cardiovascular risk factors are more prone for mortality and intubation. Especially obesity, and his is especially true in Saudi Arabia and the region of Hail, where morbid obesity (BMI >30) is at 33.6% of the population. The absence of an effective treatment other than vaccination, has led clinicians in the beginning to redirect drugs that are known to be effective for other medical conditions to its treatment, such as hydroxychloroquine (HCQ)

Our aim is to present the demographics for our inpatient population and also the percentage of intubated patients as we measured mortalities and readmissions in 30 days.

**Methods**

A retrospective cohort study of 753 patients admitted as positive COVID 19 patients, from April 1, 2020, to July 31, 2020, covering a period of 4 months. We then categorized the patient in cohorts according to the existence of diabetes mellitus or not and categorized them according to their BMI index. We then correlated using statistical tool analysis – SPSS statistics tool - intubation, mortality, readmittance in 30 days in these groups of patients

**Results**

Around 40% of our cases were diabetic. 18% of the diabetic cases intubated, instead of 7% of non DM cases. Mortalities were higher in the diabetic group as percentage (14% to 7%), and also readmissions

**Discussion**

The relevance of obesity in combination with diabetes mellitus as a significant cardiovascular risk in patients with COVID 19 infection. Significant correlation was documented between BMI and days of ICU stay (p<0.005)

**Conclusions**

There is significant morbidity in DM patients with COVID 19, especially morbid obese.