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Editorial comment

Comment on: COVID-19 patients with obesity at risk for worse outcomes despite younger age and fewer inflammatory derangements

At the time this editorial was written COVID-19 cases in the United States totaled above 33.4 million. The disease has accounted for 600,000 deaths in this country. Globally the number has reached counts above 18,000 per 100,000 individuals in parts of the world. The staggering impact of this pandemic makes understanding every facet of the disease of great importance. Currently, 151.6 million people in the US are now fully vaccinated and this rising number represents hope for the future in the face of newly emerging variants of concern [1].

Due to nonspecific symptomatology associated with COVID-19, early in the pandemic pro-inflammatory markers were helpful for providers to stratify patients who were at higher risk of a positive COVID-19 diagnosis. This was of particular importance when molecular testing had a long turnaround time. Now that molecular testing can be done rapidly, these markers have less diagnostic utility but may now serve as predictors of disease severity. Early identification of patients who are at high risk for a worse clinical course will allow for appropriate resource utilization and hopefully improved clinical outcomes. It may even help

to increase survival and decrease length of stay for these patients.

An increased focus on predicting disease severity associated with COVID-19 based on biochemical markers has become evident in the literature. A recent review showed predictive factors of severe disease from COVID-19 to include older age, male sex, and presence of 1 or more pre-existing co-morbidities. In terms of biochemical markers, lymphopenia was found to be inversely related with disease prognosis and serum lactate dehydrogenase was found to correlate with disease severity [2]. A group from Wuhan, China, recently identified that the neutrophil-to-lymphocyte ratio was a strong predictor of disease severity [3].

Research looking at ways to improve outcomes in patients with obesity who develop COVID-19 is of great importance. Data from studies like this especially in areas of particularly high obesity rates amongst patients hospitalized with COVID-19 is a great place to identify trends. It was quite notable that this study showed blunting of the inflammatory marker response in patients with COVID-19 and

obesity rates above 50%. Emerging data is showing variable responses of laboratory biomarkers in patients with different co-morbidities and will be an interesting area of research to gain further understanding [4].

A separate emerging entity termed “long COVID” is being increasingly reported. Some patients have experienced symptoms related to the disease for >28 days and in some cases longer than 12 weeks. Increasing BMI was shown to be a risk factor for higher likelihood of development of long COVID [5]. It remains to be determined if biochemical markers will show a predictive pattern in this disease process as well.

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