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LETTER TO THE EDITOR

# Letter to the Editor Concerning: Sharma, P.; McCarty, T. R.; Yadav, S.; Ngu, J. N.; and Njei, B. (2019). Impact of Bariatric Surgery on Outcomes of Patients with Sickle Cell Disease: a Nationwide Inpatient Sample Analysis, 2004–2014. Obesity Surgery, 1–8

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Dear Editor:
We would like to congratulate Sharma et al. for their original work in assessing the impact of bariatric surgery on clinical outcomes among hospitalized obese patients with sickle cell disease (SCD) [1]. Through database search, they identified 2549 patients with discharge diagnoses of SCD and morbid obesity during the 2004 to 2014 period. Forty-two patients (1.7%) had prior bariatric surgery. Prior bariatric surgery did not significantly influence the occurrence of in-hospital mortality or the rate of complications except vaso-occlusive crisis (VOC). The authors reported an interesting association between prior bariatric surgery and lower rates of VOC. They suggested that this reduction in VOC might be related to improvements in obstructive sleep apnea and hypoxic events.

Despite several strengths, some issues about the study by Sharma et al. need to be addressed.

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As the authors stated in the introduction, obesity is not a frequent condition in SCD patients since resting energy expenditure is significantly increased in children and adolescents with homozygous HbS disease [2, 3]. Moreover, obesity is significantly less frequent in the severe forms of SCD, such as HbSS as compared with the less severe forms such as HbSC [4, 5]. Although the study by Sharma et al. reported no information about SCD forms (variants), it is probable that those with a history of bariatric surgery have milder forms of the disease. Patients with milder forms of the disease naturally have lower rates of VOC [6].

Surgical procedures in sickle cell patients present increased risks of peri-operative mortality, VOC, acute chest syndrome, post-operative infections, and congestive heart failure [7]. Since bariatric surgery is proposed in patients with low or acceptable perioperative risks, it is possible that patients with milder forms of SCD are more privileged to undergo bariatric surgery than those with the severe forms.

Another argument for the presence of milder forms of SCD in the prior bariatric surgery group is that the majority of hospital admissions in this group (87.8%) were elective admissions as compared to 10.3% in the group without history of bariatric surgery. Severe forms of SCD and VOC are more likely to lead to, and be associated with, emergency than elective admissions.

The authors suggested that improvements in obstructive sleep apnea drive the reduction in VOC. However, no data were available about the BMI or the presence/absence of obstructive sleep apnea in both groups.

In conclusion, we think that selected SCD patients with morbid obesity could be safely treated with bariatric surgery. Future studies would have to determine the criteria of selection of SCD candidates for bariatric surgery.

## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

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