In subgroup analysis of patients with three or more rib fractures + flail chest, there were few significant differences. Only ICU admission, need for ventilator support, and LOS remained significantly different between NOP and SSRF patients.

Mortality was much more favorable in SSRF patients, despite their higher ISS scores. They were more complex trauma patients, but showed better mortality outcomes, despite more complications and longer hospital stays when SSRF was performed.

NTDB review identified 36,065 patients in the 65- to 79-year-old age range, with rib fractures, who did not undergo SSRF. Data showed that SSRF was only performed at a rate of 1.4% in patients with three or more rib fractures and 15.9% in patients with three or more rib fractures and flail chest, although both are widely accepted indications for SSRF.

These data suggest that SSRF is underutilized, and that performing SSRF in better surgical candidates may lead to improved outcomes. Age should not be a deterrent in patient selection and SSRF is beneficial for patients with lower ISS and isolated rib fractures.

This study sought to determine the overall utilization of surgical stabilization of rib fractures (SSRF) in the United States.

The National Trauma Database was analyzed between 2016 and 2017. The inclusion criteria were all patients ≥65 years old with rib fractures. We further stratified these patients according to age (65–79 vs. ≥80 years old), the presence of coding for flail chest, three or more rib fractures, and intervention (surgical vs. nonoperative management).

The main outcomes were surgical interventions, mortality, pneumonia, length of stay, intensive care unit length of stay, ventilator use, and tracheostomy.

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CONCLUSIONS

SSRF is underutilized. Our data suggest that SSRF may be very beneficial for the geriatric population, specifically those aged 65 to 79 years with any rib fractures. We hypothesize that roughly 20,000 additional cases will meet the inclusion criteria for SSRF each year. DOI: https://doi.org/10.20408/jt.2021.0076