This study set out to identify potential disparities in healthcare outcomes and utilization of SSRF for patients with rib fractures. Disparities on the basis of race and gender have been shown to have significant impacts on morbidity and mortality of patients who suffer traumatic injury. African American and Hispanic trauma patients have an increased unadjusted mortality rate and adjusted odds ratio of death when compared to White patients. Male gender in trauma patients is associated with increased risk of mortality, increased length of stay, and increased incidence of complications compared to females. While studies have begun to demonstrate the numerous positive impacts of SSRF on patient outcomes, there has not been a large-scale study of the racial and gender disparities that exist for rib fracture patients nationwide or of the SSRF patient population.

RESULTS

The overall mortality rate was 4.5% for White patients, 4.7% for Black patients, and 5.2% for Other Race patients (p<0.001). Mean injury severity score was 15.0±10.2 for White patients, 17.6±12.7 for Black patients, and 17.0±11.9 for Other Race patients. Both male and female White patients had significantly reduced ISS as compared to Black and Other Race males and females, respectively (p<0.001).

Patients who underwent SSRF had a significantly improved associated odds ratio of mortality for 0.15 (95% CI 0.11-0.20, p<0.001). Versus white reference, black patients had an odds ratio of mortality at 0.95 (CI 0.86-1.05, p=0.34), while Other Race patients had a ratio of 1.11 (CI 1.02-1.21, p=0.022). Male gender was associated with significantly increased OR of mortality versus female reference (OR 1.19, CI 1.11-1.28, p<0.001).

CONCLUSIONS

• Male gender was associated with an increased likelihood of fatality and surgical intervention as compared to females
• Both Black and Other Race patients had a significant increase in mean ISS compared to White patients
• Other Race patients had a significant increase in mortality compared to White patients
• SSRF was associated with an 85% reduction in likelihood of mortality
• Black patients were 31% less likely to undergo SSRF than White patients, and Other Race patients were 17% less likely

REFERENCES