

Life quality changes after SSRF in the Hungarian Aladar Petz University Teaching Hospital

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Background

According to the available literature, Surgical Stabilization of Rib Fractures (SSRF) not only improves mortality but also has the ability to restore quality of life. In clinical practice, however, some patients return to their pre-injury state while others continue to experience a reduced quality of life. This study aims to assess the factors influencing these outcomes.

Methods and Patients

Retrospective analysis was performed over a 3-year study period. The inclusion criteria were: 3 or more rib fractures; SSRF performed within 72 hours after admission. The exclusion criteria were serious brain or spinal cord injury and permanent nerve damage. The follow-up period after in-hospital care was 4 months. The Quality of Life (QoL) questionnaires were completed based on telephone and email inquiries. For the intensity of pain, the Numeral Rating Scale (0-10), and for the disability and mental status, the Patient Reported Outcomes Measurement Information System (PROMIS 10) was used. For statistical analysis, one-sample t-test was used.

Results

Forty-eight patients met the inclusion criteria, and thirty patients agreed to complete the questionnaire. The patients were divided into two groups: Group A included patients who regained their same QoL as before injury; and Group B included patients whose QoL fell short of their pre-injury level.

	Group A n= 18	Group B n= 12	
Sex: male / female	n=13 / 5	n=7 / 5	
Age	45 ± 12	51 ± 9	
Pain after SSRF	NRS: 1-2 ± 1.2	NRS: 4-7 ± 2.4	p<0.05
Disability score	1-2 ± 1.4	3-6 ± 1.4	p<0.05
Mental status score	1-2 ± 0.8	1-6 ± 1.5	p=0.18
All complaints	n=11 / 18	n=11 / 12	p<0.05
Chest wall related complaints	n=3 / 18	n=2 / 12	p=0.15
Surgical complications associated with SSRF	n=0	n=0	

Table 1: QoL and PROMIS results in both groups

	Group A n=18	Group B n= 12	
Upper limb related complaints	n=2	n=5	p<0.05
Lower limb related complaints	n=3	n=9	p<0.05
Pelvic related complaints	n=2	n=1	p=0.38
Undefined chronic pain	n=4	n=7	p<0.05

Table 2: Chest unrelated complaints

	Group A n=18	Group B n= 12	
Sleep disorder score (0-10)	2 ± 2.1	5 ± 2.7	p<0.05
Anxiety score (0-10)	3 ± 1.7	3 ± 1.9	p=0.57
Social relationship score (0-10)	n=5 ± 1.8	n=6 ± 1.9	p=0.08
Energy score (0-10)	n=2 ± 1.3	n=6 ± 2.3	p<0.05

Table 3: Mental health complaints

Discussion

According to our findings, patients whose Quality of Life fell short of the pre-injury level had a higher incidence of non-chest wall injuries. Extrathoracic patient complaints proved to be more persistent than chest-related complaints. Patients with persistent musculoskeletal complaints had less energy to work, more sleep disturbances, and higher incidence of chronic pain. Mental and physical health problems were more likely to occur in the group where non-chest complaints were higher. There was no difference between the two groups in terms of chest-related complaints.

Conclusion

Our investigation found that the main contributors to a potentially diminished Quality of Life after SSRS were predominantly extrathoracic. Therefore we can conclude that the complaints that worsened our patients' Quality of Life were not directly related to SSRF.

References

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