

Supplementary information

Title: Outcome after surgical stabilization of symptomatic rib fracture nonunion; a multicenter retrospective case series

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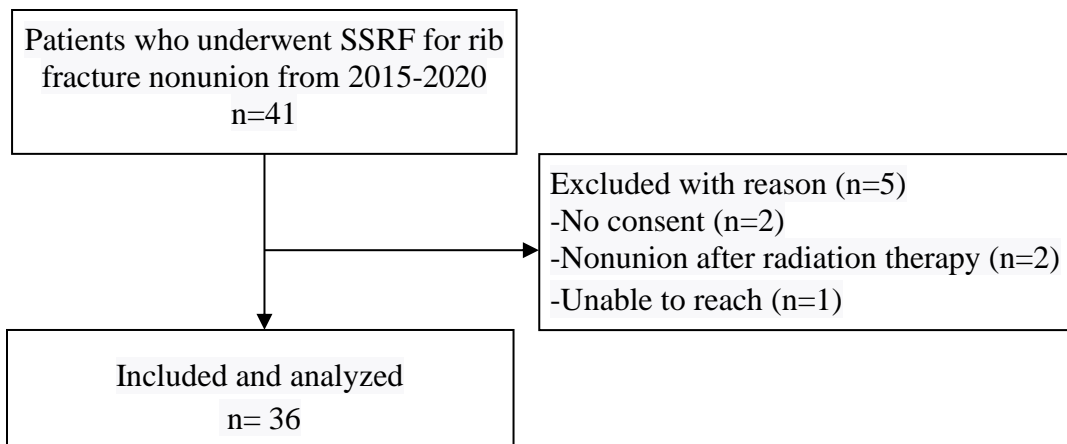
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Online Resource 1. Flowchart of the study

SSRF, surgical stabilization of rib fracture.

Online Resource 2. Pain level reported at follow-up during different activities before the rib fracture nonunion surgery for the affected and on the unaffected side, and pain level at follow-up for the affected side

| Activity | Level of pain | Before nonunion surgery | | | | After nonunion surgery at follow-up | |
|-------------|---------------|-------------------------|----------|-----------------|----------|-------------------------------------|----------|
| | | Affected side | | Unaffected side | | Affected side | |
| | | N | | N | | N | |
| Any | No | 36 | 1 (3%) | 36 | 26 (72%) | 36 | 4 (11%) |
| | Mild | | 3 (8%) | | 3 (8%) | | 13 (36%) |
| | Moderate | | 6 (17%) | | 4 (11%) | | 6 (17%) |
| | Severe | | 26 (72%) | | 3 (8%) | | 13 (36%) |
| Inspiration | No | 36 | 1 (3%) | 35 | 27 (77%) | 36 | 12 (33%) |
| | Mild | | 8 (22%) | | 4 (11%) | | 13 (36%) |
| | Moderate | | 6 (17%) | | 2 (6%) | | 7 (19%) |
| | Severe | | 21 (58%) | | 2 (6%) | | 4 (11%) |
| Rest | No | 35 | 2 (6%) | 36 | 27 (75%) | 36 | 12 (33%) |
| | Mild | | 10 (29%) | | 4 (11%) | | 14 (39%) |
| | Moderate | | 6 (17%) | | 4 (11%) | | 8 (22%) |

| | | | | | | | |
|--------------|----------|----|----------|----|----------|----|----------|
| | Severe | | 17 (49%) | | 1 (3%) | | 2 (6%) |
| Sleep | No | 36 | 2 (6%) | 36 | 28 (78%) | 36 | 10 (28%) |
| | Mild | | 8 (22%) | | 2 (6%) | | 10 (28%) |
| | Moderate | | 5 (14%) | | 4 (11%) | | 13 (36%) |
| | Severe | | 21 (58%) | | 2 (6%) | | 3 (8%) |
| Pressure | No | 36 | 2 (6%) | 35 | 28 (80%) | 36 | 8 (22%) |
| | Mild | | 5 (14%) | | 2 (6%) | | 14 (39%) |
| | Moderate | | 6 (17%) | | 2 (6%) | | 7 (19%) |
| | Severe | | 23 (64%) | | 3 (9%) | | 7 (19%) |
| Housekeeping | No | 30 | 2 (7%) | 33 | 26 (79%) | 33 | 9 (27%) |
| | Mild | | 9 (30%) | | 1 (3%) | | 11 (33%) |
| | Moderate | | 1 (3%) | | 4 (12%) | | 7 (21%) |
| | Severe | | 18 (60%) | | 2 (6%) | | 6 (18%) |
| Work | No | 19 | 1 (5%) | 23 | 18 (78%) | 23 | 9 (39%) |
| | Mild | | 4 (21%) | | 0 (0%) | | 4 (17%) |
| | Moderate | | 3 (16%) | | 2 (9%) | | 4 (17%) |
| | Severe | | 11 (58%) | | 3 (13%) | | 6 (26%) |
| Sports | No | 16 | 1 (6%) | 18 | 14 (78%) | 17 | 6 (35%) |

| | | | |
|----------|----------|---------|---------|
| Mild | 4 (25%) | 1 (6%) | 7 (41%) |
| Moderate | 1 (6%) | 0 (0%) | 0 (0%) |
| Severe | 10 (63%) | 3 (17%) | 4 (24%) |

Data are shown as N (%). N represents the number of patients for whom data were available.

No pain, NRS 0; Mild pain, NRS 1-3; Moderate pain, NRS 4-6; Severe pain , NRS 7-10

NRS, numeric rating scale.

Online Resource 3. Satisfaction reported at final follow-up for the entire study population

| | Functional result (n=36) | Cosmetic result (n=34) | Work resumption (n=22) | Sports and activity resumption (n=23) | Decision for surgery (n=35) |
|---------------------------|--|--|--|---|---|
| Very dissatisfied (NRS 0) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (4%) | 3 (9%) |
| Dissatisfied (NRS 1-3) | 5 (14%) | 2 (6%) | 0 (0%) | 2 (9%) | 1 (3%) |
| Satisfied (NRS 4-6) | 4 (11%) | 5 (15%) | 7 (32%) | 5 (22%) | 6 (17%) |
| Very satisfied (NRS 7-10) | 27 (75%) | 27 (79%) | 15 (68%) | 15 (65%) | 25 (71%) |

Data are shown as N (%). N represents the number of patients for whom data were available.

NRS, numeric rating scale.