Supplementary information

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

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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 | 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%) |
| Activity      | No  | Mild | Moderate | Severe |
|---------------|-----|------|----------|--------|
| Sleep         | 36  | 2 (6%) | 28 (78%) | 2 (6%) |
| Pressure      | 36  | 2 (6%) | 28 (80%) | 2 (6%) |
| Housekeeping  | 30  | 2 (7%) | 26 (79%) | 9 (27%) |
| Work          | 19  | 2 (5%) | 18 (78%) | 9 (39%) |
| Sports        | 16  | 2 (6%) | 14 (78%) | 6 (35%) |
| Mild      | Moderate   | Severe     |
|-----------|------------|------------|
| 4 (25%)   | 1 (6%)     | 7 (41%)    |
| 1 (6%)    | 0 (0%)     | 0 (0%)     |
| 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 | Cosmetic result | Work resumption | Sports and activity resumption | Decision for surgery |
|--------------------------|-------------------|-----------------|-----------------|--------------------------------|----------------------|
| 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.