

**TABLE E-1 Intraoperative Findings in Each Procedure Group**

| Parameter                           | Plate Fixation (N = 58) | Intramedullary Nailing (N = 62) |
|-------------------------------------|-------------------------|---------------------------------|
| Duration of surgery* ( <i>min</i> ) | 54.0 ± 16.6             | 43.1 ± 23.9                     |
| Conversion†                         | 1 (2%)                  | 6 (10%)                         |
| Open fracture reduction†            | 58 (100%)               | 46 (74%)                        |
| Neurovascular damage†               | 0                       | 0                               |
| Incomplete reduction†               | 0                       | 1 (2%)                          |
| Lateral cortical perforation†       | Not applicable          | 1 (2%)                          |

\*The values are given as the mean and standard deviation. †The values are given as the number with the percentage in parentheses.

**TABLE E-2 Mean Improvement in SF-36 Subscale Scores Compared with Baseline**

|   | Plate Fixation | Intramedullary Nailing | P Value |
|---|----------------|------------------------|---------|
| 6 mo after surgery compared with baseline |                |                        |         |
| No. of patients                           | 47             | 58                     |         |
| SF-36 score*                              |                |                        |         |
| Physical functioning                      | 44.1 ± 23.4    | 35.0 ± 26.2            | 0.07    |
| Role-physical functioning                 | 72.3 ± 41.2    | 63.8 ± 49.4            | 0.35    |
| Bodily pain                               | 55.9 ± 23.8    | 42.5 ± 33.6            | 0.02†   |
| General health perception                 | 2.4 ± 22.0     | 2.3 ± 16.9             | 0.22    |
| Energy/fatigue (vitality)                 | 15.6 ± 25.4    | 4.7 ± 26.3             | 0.03†   |
| Social functioning                        | 27.7 ± 30.6    | 17.7 ± 27.5            | 0.08    |
| Role-emotional functioning                | 15.2 ± 42.6    | 5.2 ± 46.6             | 0.26    |
| Mental health                             | 4.3 ± 20.3     | 3.4 ± 21.2             | 0.82    |
| 1 yr after surgery compared with baseline |                |                        |         |
| No. of patients                           | 53             | 59                     |         |
| SF-36 score*                              |                |                        |         |
| Physical functioning                      | 43.0 ± 22.7    | 39.5 ± 22.9            | 0.42    |
| Role-physical functioning                 | 76.9 ± 39.8    | 68.2 ± 45.7            | 0.29    |
| Bodily pain                               | 58.5 ± 19.3    | 48.0 ± 28.4            | 0.07    |
| General health perception                 | 4.8 ± 19.6     | 0.4 ± 26.2             | 0.13    |
| Energy/fatigue (vitality)                 | 15.7 ± 22.1    | 4.6 ± 26.8             | 0.02†   |
| Social functioning                        | 27.1 ± 33.9    | 19.9 ± 27.2            | 0.36    |
| Role-emotional functioning                | 12.2 ± 40.7    | 8.5 ± 48.2             | 0.67    |
| Mental health                             | 4.9 ± 17.5     | 5.6 ± 22.1             | 1       |

\*The values are given as the mean and standard deviation. The missing values were excluded. †A significant difference between groups.

**TABLE E-3 Postoperative Complications After Plate Fixation and Intramedullary Nailing**

| Complication  | Treatment                              | No. (%)                    |                                    |
|---|--|----------------------------|------------------------------------|
|   |  | Plate Fixation<br>(N = 58) | Intramedullary Nailing<br>(N = 62) |
| Infection   |  |                            |                                    |
| Superficial   | Antibiotics                            | 3 (5%)                     | 0                                  |
| Deep  | Surgical drainage                      | 0                          | 0                                  |
| Desensitized skin, hematoma   | Self-limiting                          | 5 (9%)                     | 6 (10%)                            |
| Transient neurapraxia   | Self-limiting                          | 0                          | 1 (2%)                             |
| Irritation due to implant protrusion  | Observation                            | 13 (22%)                   | 1 (2%)                             |
|   | Minor revision*                        | Not applicable             | 10 (16%)                           |
|   | Implant removal:<br>local anesthesia   | Not applicable             | 8 (13%)                            |
|   | Implant removal:<br>general anesthesia | 11 (19%)                   | 25 (40%)                           |
| Implant breakage  | Major revision                         | 1 (2%)                     | 0                                  |
| Implant failure   | Major revision                         | 0                          | 2 (3%)                             |
| Nonunion  | Major revision                         | 1 (2%)                     | 0                                  |
| Malunion  | Major revision                         | 0                          | 0                                  |
| Refracture after implant removal  | Major revision                         | 2 (3%)                     | 0                                  |
| <p>*The minor implant revisions, which were performed with local anesthesia, included partial removal of the protruding end of an implant. All ten patients who underwent partial removal subsequently had total implant removal due to persistent irritation after the minor revision. Since they were similar complication types, the partial and subsequent removals were counted as only one complication when we summed the total number of complications per study group.</p> |  |                            |                                    |