**Supplemental Table 1**. Orientation of condylar displacement changes

|  |  |  |
| --- | --- | --- |
| 　 | Positive value | Negative value |
| Translational changes | 　 |
| A-P | Anterior | Posterior |
| R-L | Right | Left |
| S-I | Superior | Inferior |
| Rotational changes |  |
| Yaw  | Anterior rotation of the lateral pole/posterior rotation of the medial pole | Posterior rotation of the lateral pole/anterior rotation of the medial pole |
| Pitch | Counterclockwise rotation (upward pitch) | Clockwise rotation (downward pitch) |
| Roll  | Lateral rotation | Medial rotation  |

A-P, anteroposterior; R-L, right-left; S-I, superior-inferior.

**Supplemental Table 2**. Comparison of condylar displacement between the deviated and non-deviated sides after surgery (T0) and during follow up (T1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   |   | Deviated side | Non-deviated side | P\* |
| Translation | A-P | -0.47 ± 0.66 | 0.35 ± 0.48 | 0.007  |
| R-L | -0.08 ± 0.92 | -0.35 ± 0.80 | 0.861  |
| S-I | 0.15 ± 1.34 | -0.51 ± 0.68 | 0.152  |
| Rotation | Yaw | 0.47 ± 4.79 | 2.19 ± 3.93 | 0.507  |
| Pitch | 2.50 ± 16.37 | 2.33 ± 13.28 | 0.600  |
| Roll | 1.03 ± 4.99 | 0.49 ± 5.48 | 0.701  |

A-P, anteroposterior; R-L, right-left; S-I, superior-inferior.

\*P for difference between the deviated and the non-deviated sides by using the Wilcoxon signed rank test. (P=0.05)

**Supplemental Table 3**. Mean difference in condylar shape change between the deviated and non-deviated sides

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Deviated | Non-deviated | Difference (95% CI) | \*P |
| Anterior I | 0.16 ± 0.64 | 0.22 ± 0.50  | -0.05 (-0.46, 0.35) | 0.775 |
| Anterior II | 0.17 ± 0.54  | 0.30 ± 0.39  | -0.13 (-0.42, 0.16) | 0.344 |
| Posterior I | 0.07 ± 0.48  | 0.25 ± 0.38  | -0.18 (-0.49, 0.13) | 0.232 |
| Posterior II | 0.01 ± 0.49  | 0.25 ± 0.27  | -0.24 (-0.51, 0.03) | 0.072 |
| Superior I | 0.02 ± 0.51  | 0.18 ± 0.27  | -0.16 (-0.44, 0.12) | 0.229 |
| Superior II | 0.00 ± 0.52  | 0.15 ± 0.27  | -0.15 (-0.47, 0.17) | 0.325 |
| Lateral | -0.03 ± 0.50  | 0.11 ± 0.27  | -0.14 (-0.48, 0.19) | 0.364 |
| Medial | -0.00 ± 0.50  | 0.15 ± 0.25  | -0.15 (-0.47, 0.17) | 0.323 |

CI, confidence interval; Anterior I, anterolateral region; Anterior II, anteromedial region; Posterior I, posterolateral region; Posterior II, posteromedial region; Superior I, superolateral region; Superior II, superomedial region.

\*P for difference between the deviated and the non-deviated side (P=0.05)

**Supplemental Table 4**. Pearson's correlation analysis between the condylar displacement and the surface remodeling

|  |  |  |  |
| --- | --- | --- | --- |
| 　 | 　 | Deviated side | Non-deviated side |
| 　 | 　 | R-L | A-P | S-I | Yaw | Pitch | Roll | R-L | A-P | S-I | Yaw | Pitch | Roll |
| Deviated side | Anterior I | 0.342 | 0.637\* | -0.040 | 0.066 | -0.206 | -0.448 | -0.563\* | -0.039 | 0.316 | 0.013 | 0.227 | -0.135 |
|  | Anterior II | 0.451 | 0.573\* | -0.046 | 0.161 | -0.223 | -0.490 | -0.471 | -0.213 | 0.125 | -0.022 | 0.244 | -0.110 |
|  | Posterior I | 0.365 | 0.565\* | -0.009 | 0.177 | -0.242 | -0.552 | -0.510 | -0.107 | 0.265 | 0.005 | 0.247 | -0.012 |
|  | Posterior II | 0.315 | 0.576\* | -0.003 | 0.208 | -0.225 | -0.564\* | -0.581\* | -0.179 | 0.284 | -0.171 | 0.164 | -0.085 |
|  | Superior I | 0.349 | 0.532 | 0.050 | 0.204 | -0.265 | -0.605\* | -0.608\* | -0.162 | 0.213 | -0.250 | 0.160 | -0.035 |
|  | Superior II | 0.380 | 0.480 | 0.100 | 0.211 | -0.278 | -0.616\* | -0.617\* | -0.128 | 0.162 | -0.288 | 0.142 | 0.013 |
|  | Lateral | 0.365 | 0.544 | 0.053 | 0.175 | -0.323 | -0.646\* | -0.580\* | -0.123 | 0.211 | -0.280 | 0.124 | -0.032 |
|  | Medial | 0.338 | 0.567\* | 0.076 | 0.116 | -0.319 | -0.615\* | -0.622\* | -0.035 | 0.278 | -0.257 | 0.125 | -0.056 |
| Non-deviated side | Anterior I | 0.342 | 0.361 | -0.312 | 0.375 | 0.221 | 0.012 | -0.003 | -0.481 | -0.310 | -0.061 | 0.190 | -0.145 |
| Anterior II | 0.295 | 0.491 | -0.350 | 0.237 | 0.148 | -0.037 | -0.022 | -0.440 | -0.233 | -0.065 | 0.197 | -0.218 |
| Posterior I | 0.462 | 0.479 | -0.380 | 0.496 | 0.028 | -0.289 | -0.106 | -0.416 | -0.285 | -0.282 | 0.098 | -0.098 |
| Posterior II | 0.352 | 0.664\* | -0.417 | 0.384 | 0.025 | -0.279 | -0.009 | -0.232 | -0.071 | -0.007 | 0.204 | -0.084 |
| Superior I | 0.102 | 0.431 | -0.409 | 0.626\* | 0.401 | -0.011 | -0.002 | -0.268 | 0.134 | 0.193 | 0.167 | 0.001 |
| Superior II | 0.012 | 0.270 | -0.418 | 0.694\* | 0.591\* | 0.200 | 0.090 | -0.274 | 0.098 | 0.192 | 0.047 | 0.006 |
| Lateral | -0.146 | 0.090 | -0.414 | 0.691\* | 0.669\* | 0.324 | 0.160 | -0.302 | 0.156 | 0.277 | <0.001 | 0.029 |
| Medial | -0.009 | 0.282 | -0.494 | 0.688\* | 0.585\* | 0.175 | 0.149 | -0.383 | 0.058 | 0.259 | 0.120 | 0.053 |

\*Statistically significant

R-L, right-left; A-P, anteroposterior; S-I, superior-inferior

Anterior I, anterolateral region; Anterior II, anteromedial region; Posterior I, posterolateral region; Posterior II, posteromedial region; Superior I, superolateral region; Superior II, superomedial region.