**Supplemental Table 1.** Baseline characteristics, periodontal examination data, and serum levels of inflammatory markers

|  |  |  |
| --- | --- | --- |
| Baseline demographic and characteristics | 　 | n |
| Female patients (%) | 64.1  | 153 |
| Age, years (Mean, SD) | 57.01, 12.0 | 153 |
| BMI (Mean, SD) | 18.19, 2.8 | 153 |
| Smoker | 13.1  | 153 |
| Hypertension | 4.6  | 153 |
| Dyslipidemia | 0.007  | 153 |
| Tooth number (Mean, SD) | 26.07, 2.7 | 153 |
| PISA (mm2, median, range) | 856, 26-4041.2 | 153 |
| Masticatory efficiency (mg/dL, median, range) | 153, 30-357 | 133 |
| HsCRP (μg/L, median, range) | 5740, 50-105000 | 138 |
| IL-6 (pg/mL, median, range) | 1.7, 0.4-34.5 | 150 |

Abbreviations: BMI, body mass index; PISA, periodontal inflamed surface area; HsCRP, high-sensitivity C-reactive protein; IL-6; interleukin-6; SD, standard deviation

**Supplemental Table 2.** PISA and masticatory efficiency values at baseline and after initial treatment

|  |  |  |  |
| --- | --- | --- | --- |
|  | Baseline | After initial treatment | *p* |
| PISA (mm2, Median, (IQR)) | 856 (526.4, 1591.6) | 277.5 (119.8, 430.1) | <0.001 |
| Masticatory efficiency (mg/dL, Average (SD)) | 153.3 (65.2) | 166.9 (68.3) | <0.01 |

Sample size. PISA, baseline, n=152; after treatment, n=145; masticatory efficiency, baseline, n=133; after treatment, n=130.

Differences in pre-post data were analyzed using the Wilcoxon signed-rank test in PISA and paired t-test for masticatory efficiency.

PISA: periodontal inflamed surface area; SD: standard deviation; IQR: interquartile range

**Supplemental Table 3.** PISA value in PD classification.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| n | Age (mean (SD)) | Teeth (mean (SD), median (IQR)) | PISA (mm2, mean (SD), median (IQR)) | Classification | Reference |
| 19 | 48.9 (10.8) | 27 (19-28) | 597.7 (441.1) | Stage Ⅲ (n, %) (11, 57.9） | Laky B et l., 2023 |
| 20 | 51.6 (9.1) | - | 34.4 (16.48) | healthy | Leira Y et al., 2018 |
| 20 | 52.2 (8.2) | - | 292.74 (98.08) | mild |
| 20 | 56.4 (8.9) | - | 645.66 (86.29) | moderate |
| 20 | 56.7 (5.7) | - | 2309.42 (587.69) | severe |
| 45 | 51.6 (6.2) | tooth loss: 5.3 (3.2) | 1106.7 (805.1) | Stage Ⅲ,Ⅳ (n, %) 25 (55.6) | Donders HC et al., 2021 |
| 467 | 73.1 (6.3) |  25 (21-27) | 90.6 (142.8) | Stage Ⅲ,Ⅳ (n, %) 251 (53.7) | Iwasaki M et al., 2023 |
| 81 | 44.48 (13.58) | 28.33 (2.33) | 25 (13, 44) | healthy | Zhou J et al., 2021 |
| 122 | 47.47 (14.05) | 27.86 (2.72) | 176.8 (161.6, 199.2) | Stage Ⅲ,Ⅳ (n, %) 122 (100) |
| 28 | 31.0 (1.2) | - | 116.0 (15.9) | mild | Park SY et al., 2017 |
| 40 | 38.9 (1.7) | - | 259.7 (29.9) | moderate |
| 16 | 47.5 (2.8) | - | 406.7 (93.7) | severe |

-: not described.