**Supplementary1**

|  |  |  |  |
| --- | --- | --- | --- |
| Lumbosacral Root | Mean root thickness (mm±SE) in the control group (n=85) | Mean root thickness (mm±SE) in the study group (n=350) | *P*-value |
| L1 | 3.9 ± 0.65 | 3.9 ± 0.81 | 0.45 |
| L2 | 4.155 ± 0.375 | 4.17 ± 0.79 | 0.15 |
| L3 | 4.31 ± 0.68 | 4.3 ± 0.87 | 0.62 |
| L4 | 5.23 ± 0.625 | 5.2 ± 0.72 | 0.37 |
| L5 | 5.31 ± 0.605 | 5.32 ± 0.45 | 0.51 |
| S1 | 5.4 ± 0.84 | 5.45 ± 0.8 | 0.53 |

**A**

A

**B**

**Supplementary1: Comparing the diameters of lumbosacral nerve roots between the control group (no structural changes and no pain) and the study group (no structural changes but with pain).** (A) The table show the mean root thickness in both the study group and the control group, the *P*- value show no significant changes in the mean root thickness between the two groups. (B) Graphical representation for the mean root thickness in both the control group and the study group according to the lumbosacral root level.

**Supplementary 2**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ligamentum flavum spinal level**A**  | Right Side (mm±SE) in the control group(n=85) | Right Side (mm±SE) in the study group (n=350) | *P*-Value | Left Side (mm±SE) in the control group(n=85) | Left Side (mm±SE) in the study group(n=350) | *P*- Value |
| L2-L3 | 3.19±0.33 | 3.22 ± 0.31 | 0.45 | 3.45±0.33 | 3.45 ± 0.29 | 0.55 |
| L3-L4 | 3.38±0.15 | 3.39 ± 0.12 | 0.67 | 3.48±0.24 | 3.47± 0.19 | 0.47 |
| L4-L5 | 3.79±0.31 | 3.77 ± 0.25 | 0.52 | 3.9±0.09 | 3.84 ± 0.12 | 0.61 |
| L5-S1 | 3.66±0.25 | 3.63 ± 0.21 | 0.39 | 3.73±0.15 | 3.7 ± 0.2 | 0.57 |

**B**

**C**

**Supplementary 2: Comparing the thickness of ligamentum flavum between the control group (no structural changes and no pain) and the study group (no structural changes but with pain).** (A) The table show the thickness of both right and left ligamentum flavum in the study group and the control group, the *P*- value show no significant changes in either the right or the left ligamentum flavum between the two groups. (B) Graphical representation of the ligamentum flavum in the right side in both the control group and the study group according to the spinal level. (B) Graphical representation of the ligamentum flavum in the left side in both the control group and the study group according to the spinal level