|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Irrigant agent** | **Ultrasonic instrumentation** | **Root third** | **Push out bond strength** | **Grand mean** |
| Distilled water | Absent | Cervical | 19.05 (6.93) | 16.05 AB  (8.83) |
| Middle | 11.04 (6.11) |
| Apical | 11.25 (9.40) |
| Present | Cervical | 25.76 (10.98) |
| Middle | 14.71 (5.30) |
| Apical | 15.71 (6.06) |
| 2% chlorhexidine digluconate | Absent | Cervical | 18.05 (7.13) | 15.05 B  (8.55) |
| Middle | 11.21 (7.80) |
| Apical | 14.99 (7.63) |
| Present | Cervical | 18.83 (10.75) |
| Middle | 14.33 (10.71) |
| Apical | 11.91 (3.51) |
| 17% EDTA | Absent | Cervical | 20.46 (10.31) | 19.54 A  (10.76) |
| Middle | 17.09 (6.72) |
| Apical | 11.08 (7.60) |
| Present | Cervical | 24.91 (12.94) |
| Middle | 26.10 (12.36) |
| Apical | 19.17 (8.40) |
| 2.5% sodium hypochlorite | Absent | Cervical | 16.82 (6.88) | 17.10 AB  (9.90) |
| Middle | 11.79 (5.62) |
| Apical | 13.75 (13.95) |
| Present | Cervical | 24.46 (11.77) |
| Middle | 17.30 (7.02) |
| Apical | 19.38 (9.68) |
| Saline solution | Absent | Cervical | 16.31 (7.57) | 14.89 B  (8.55) |
| Middle | 9.99 (3.31) |
| Apical | 10.13 (5.89) |
| Present | Cervical | 21.23 (13.40) |
| Middle | 18.46 (7.18) |
| Apical | 14.38 (7.88) |

Grand means followed by different capital letters indicate significant difference between irrigants, regardless of the ultrasound instrumentation and root third.