



Università di Siena

School of Dental Medicine
Department of Prosthodontics and Dental Materials

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To Who It May Concern

COMPARISON AMONG MATERIALS FOR EACH OBTURATION TECHNIQUES

MATERIALS AND METHODS

Statistical analysis

In order to verify the presence of statistically significant differences regarding the push out test (in MegaPascal) among different endodontic sealers, data that were collected for each obturation technique were analysed with ANOVA Non Parametric test of Kruskal-Wallis. This test was used because the data did not show a normal distribution (test di Shapiro-Wilk, $p < 0,05$). In all statistical tests the level of significance was $p < 0,05$.

RESULTS

The results are reported in Tables 1-3 and describe the values of resistance (push-out) obtained with the different endodontic sealers when used in each obturation techniques.

The ANOVA Non Parametric test (Kruskal-Wallis) showed that there were no statistical significance differences among the endodontic sealers when used in all obturation techniques ($p=0,174$, $p=0,667$, $p=0,148$ for 'Continuous wave', 'Domino' e 'Single cone' respectively).

Table 1. Statistical values related to the push-out recorded for all endodontic sealers when used in combination with the 'Continuous wave' technique.

Cement	N	Mediana	25%	75%
Ceraseal	36	2,013	0,930	4,864
AH Plus	39	2,320	1,056	4,055
Bio-C Ion+	37	3,246	1,881	5,053
BioRoot	37	2,093	1,143	3,799
One-Fil (OGNA/MDCLUS)	15	2,254	1.076	4,901

Table 2. Statistical values related to the push-out recorded for all endodontic sealers when used in combination with the ‘Domino’ technique

Cement	N	Mediana	25%	75%
Ceraseal	37	1,714	0,915	4,137
AH Plus	37	2,368	0,976	4,788
Bio-C Ion+	38	2,057	0,822	3,659
BioRoot	38	2,675	1,507	3,154
One-Fil (OGNA/MDCLUS)	16	2,435	0,981	4,534

Table 3. Statistical values related to the push-out recorded for all endodontic sealers when used in combination with the ‘Single Cone’ technique

Cement	N	Mediana	25%	75%
Ceraseal	36	2,157	1,390	2,979
AH Plus	37	1,987	0,864	3,220
Bio-C Ion+	40	3,292	1,522	5,302
BioRoot	39	1,946	1,343	3,412
One-Fil (OGNA/MDCLUS)	18	2,238	1,196	2,980

COMPARISON AMONG OBTURATION TECHNIQUES FOR EACH ENDODONTIC SEALER

MATERIALIS AND METHODS

Statistical analysis

In order to verify the presence of statistically significant differences regarding the push out test (in MegaPascal) among different obturation techniques, data that were collected for each endodontic sealer were analysed with ANOVA Non Parametric test of Kruskal-Wallis. This test was used because the data did not show a normal distribution (test di Shapiro-Wilk, $p < 0,05$). In all statistical tests the level of significance was $p < 0,05$.

RISULTS

The results are reported in Tables 4-8 and describe the valous of resistance (push-out) obtained with the different obturation techniques when used in each endodontic sealer.

The ANOVA Non Parametric test (Kruskal-Wallis) showed that they were no statistical significance differences among the obturation techniques.

Table 4. Statistical values related to the push-out recorded for all obturation techniques when used in combination with Ceraseal.

Technique	N	Mediana	25%	75%
Continuous wave	36	2,013	0,930	4,864
Domino	37	1,714	0,915	4,137
Single Cone	36	2,157	1,390	2,979

Table 5. Statistical values related to the push-out recorded for all obturation techniques when used in combination with AH Plus.

Technique	N	Mediana	25%	75%
Continuous wave	39	2,320	1,056	4,055
Domino	37	2,368	0,976	4,788
Single Cone	37	1,987	0,864	3,220

Table 6. Statistical values related to the push-out recorded for all obturation techniques when used in combination with Bio-C Ion+.

Technique	N	Mediana	25%	75%
Continuous wave	37	3,246	1,881	5,053
Domino	38	2,057	0,822	3,659
Single Cone	40	3,292	1,522	5,302

Table 7. Statistical values related to the push-out recorded for all obturation techniques when used in combination with BioRoot.

Technique	N	Mediana	25%	75%
Continuous wave	37	2,093	1,143	3,799
Domino	38	2,675	1,507	3,154
Single Cone	39	1,946	1,343	3,412

Table 8. Statistical values related to the push-out recorded for all obturation techniques when used in combination with One-Fil (OGNA/MDCLUS).

Technique	N	Mediana	25%	75%
Continuos wave	15	2,254	1,076	4,901
Domino	16	2,435	0,981	4,534
Single Cone	18	2,238	1,196	2,980

Marco Ferrari, MD, DMD, Ph D

