INTRODUCTION

Multi-Mode (MM) are contemporary generation of simplified adhesives indicated for use under different application strategies.

OBJECTIVE

Describing the randomized clinical trial (RCT) design and baseline output of MM adhesives applied by Self-Etch (SE; with non-etched or etched enamel) and Etch-and-Rinse (ER) strategies, analyzing NCCL restorations for two-years (2016-2018).

MATERIAL and METHODS

Prospective, double blind RCT approved by UFP Ethics Committee, National Clinical Trials Ethics Committee (NCTEC-20150305). Informed (EC/011/2015), NCT02698371, in 38 patients with 210 restorations (Admira Fusion®; nanohybrid-ormocomposite) randomly allocated according to 6 groups (Adhesive systems; adhesion strategies) of 35 restorations (Table 1). All restorations done by one operator and evaluated (esthetic, functional and biological parameters) at baseline (one month after restoration) by 3 calibrated examiners (ICC=0.952) using USPHS and FDI criteria.

RCT design included NCCL characteristics (Tables 2 and 3). Baseline reports the restorations/adhesion strategies efficacy (success rate). Statistical analysis with nonparametric tests using alpha=0.05.

RESULTS

Median age: 55.5 years (24-63-years-old), 21 (55.3%) male (T. Mann-Whitney; p=0.508).

NCCL in 176 (83.8%) pre-molar and 34 (16.2%) molar teeth; three to six restorations per patient: 210-NCCL restorations characteristics: Dentin sclerosis categories (Table 2): 146 (69.5%) One, 35 (16.7%) Two, 8 (3.8%) Three and 21 (10%) Four, no significant differences found per group (Chi²-test; p=0.353).

NCCL-Cavity geometry 84% (40%) Acute, 60 (28.6%) Severe and 60 (31.4%) Obtuse, no significant differences found per group (Chi²-test; p=0.903). No differences in tooth type (pre-molar/molar) per RCT groups (p=0.252). Median NCCL estimated volume (Height x Width x Depth) of 30.3 (15.6-40) mm³ (Table 2).

At baseline (Table 4) all restorations showed 100% aesthetic, functional and biological success rates in RCT groups.

DISCUSSION

Efficacy of different adhesion strategies are usually evaluated in NCCL restorations. No differences were found in NCCL characteristics by RCT groups. RCT designs should include NCCL features when evaluating clinical performance of adhesion’s strategies.

CONCLUSIONS

NCCL characteristics were similar in RCT groups. MM adhesives with different strategies showed baseline excellent performance.

CLINICAL IMPLICATIONS

Restoration evaluation at mean/long term are mandatory to determine clinical performance of MM adhesions strategies.

REFERENCES