Evaluation of the Clinical and Radiographic Success of Platelet-Rich Fibrin, Chitosan, and Blood Clot as Scaffolds in Regenerative Endodontic Treatment of Molars

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Study Design and Statistical Analysis Plan

This study was designed as a randomized, controlled, single-blind prospective clinical trial. The minimum required sample size was calculated using G*Power Version 3.1.9.4. Assuming a confidence level of 95% (1-α), a power of 80% (1-β), and an effect size of d = 0.7, the total required sample size for comparing three independent groups was calculated as 24, with 8 teeth in each group.

Data were analyzed using IBM SPSS Statistics Version 23 and R software. The Shapiro–Wilk test was employed to assess the normality of the data distribution. For comparisons involving three or more groups with normally distributed data, one-way analysis of variance (ANOVA) was conducted. In cases where the data did not follow a normal distribution, the Kruskal–Wallis H test was applied for comparisons across three or more groups.

Robust regression analysis was conducted to identify independent variables affecting non-normally distributed outcomes. The Fisher–Freeman–Halton test was used to examine associations between categorical variables. Inter-observer agreement was assessed using the intraclass correlation coefficient (ICC).Descriptive statistics are presented as frequencies and percentages for categorical variables; and as mean ± standard deviation, median (minimum–maximum), or median (25th–75th percentile) for continuous variables, depending on the distribution. A p-value of <0.05 was considered statistically significant.