A clinical study to assess cause and severity of failure in conventional fixed prosthodontics

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ABSTRACT:

Aim: The aim of this study was to assess cause and severity of failure in conventional fixed prosthodontics and classify them according to Manappallil classification.

Methodology: The cross-sectional study was carried out on the patients reporting to department of prosthodontics and purpose of the study were explained and their consent was taken. Total of 150 patients were examined in the study which include 73 males and 77 females. Subjects were examined clinically for the fixed dental prosthesis failure and cause of the failure, and categorised according to Manappallil classification. Chi-square test was used for statistical analysis.

Results: After assessment of collected data and statistical analysis significant difference was found in the failure of fixed prosthesis according to gender distribution(p<0.031). Data shows that according to Manappallil classification fixed dental prosthesis failures were class I failure (28%), class II failure (8.6%), class III failure (28.6%), class IV failure(20%), class V failure (6.8%) and class VI failure (8%). In this study,42 subjects having cementation failure, porcelain fracture (31), carious teeth (30), periodontal failure

(12), fractured teeth (10), FDP perforation (13), deficient margin(12).The most common FDP failures were mechanical failure(45%) followed by biological failure(34%) and aesthetic failure(21%)There was a statistically significant difference in the failure of fixed prosthesis distribution according to Manappallil classification (p< 0.029)

Conclusion: The study concluded that causes of fixed dental prosthesis failures in decreasing order was: Cementation failure > porcelain fracture > carious teeth > perforations > periodontal failures > deficient margins > fractured teeth. The most common type of failure were mechanical failure > biological failure > Aesthetic failure. The purpose of this study was to assess cause and severity of failure in conventional fixed prosthodontics and classify them according to Manappallil classification.

KEYWORDS: fixed dental prosthesis failure, mechanical failure, biologic failure, aesthetic failure.