



Comparison of Success Rate of Fixed Partial Denture and Root Canal Treatment for the Management of Grossly Carious Teeth.

Dr. Ankur Chauhan¹, Dr. Pravin Uttam Gaikwad², Dr. Kanishk Gupta³, Dr. Pratishta tanwar⁴, Dr. Prashant M. Wasu⁵, Dr. Mrs Manisha R. Dehankar⁶

¹Medical officer (Dental, MDS, Primary Health Centre Summerkot, Tehsil Rohru, District Shimla. .P.

²Reader, Dept of Prosthodontics and crown and bridge, M.A.Rangoonwala college of dental sciences and research centre, pune

³Department of Periodontology, Dentistry Program, Batterjee Medical College, Jeddah, 21442, Saudi Arabia.

⁴Senior lecturer in the department of conservative and endodontics in inderprastha dental college and hospital industrial area Sahibabad gaziabad, U

⁵Lecturer, Deptt of Prosthodontia, V.Y.W.S.Dental College And Hospital, Amravati

⁶MBBS, Lecturer in General Pharmacology, V.Y. W. S.Dental college and hospital, Amravati (M.S.)

Corresponding author: Dr. Ankur Chauhan, Medical officer (Dental, MDS, Primary Health Centre Summerkot, Tehsil Rohru, District Shimla. H.P.

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KEYWORDS

FPD, RCT, Success rate, Complications

ABSTRACT:

Background: This study was conducted to assess the comparison of success rate of FPD and root canal treatment for the management of grossly carious teeth.

Material and methods: This study was conducted to assess the comparison of success rate of FPD and root canal treatment for the management of grossly carious teeth. This study comprised of 100 subjects with grossly carious teeth. The procedure of the study had been explained to all the subjects and the subjects had been asked to give consent. The subjects who provided consent for the study had been included in the study. The subjects had undergone oral clinical examination. Two groups were formed based on the treatment of grossly carious teeth. Group 1 comprised of subjects treated with Fixed Partial Denture for grossly carious teeth while Group 2 comprised of subjects treated with root canal treatment for grossly carious teeth. The success rates of both the treatment strategies had been noted down. Statistical analysis was conducted using SPSS software.

Results: In this study, there were total 100 subjects. There were 50 subjects in the FPD group and there were 50 subjects in the RCT group. There were 5 cases of root canal perforation, 9 cases of over-instrumentation, 3 cases of infection and 8 cases of lack of coronal seal. 50% of the cases had complications in root canal treatment in this study. There were 6 cases of porcelain fracture, 7 cases of distortion, 5 cases of occlusal wear and perforation and 11 cases of crown fracture. Total 58% of cases had complications of FPDs in this study. The success rate of FPDs in this study was 42% and the success rate of RCT in this study was 50%.

Conclusion: The success rate of FPDs in this study was 42% and the success rate of RCT in this study was 50%.

Introduction

Preservation of a patient's natural dentition remains an important outcome in securing oral health. Endodontic



treatments have been shown to successfully retain compromised teeth which were fractured, carious, or traumatised, for many decades. However, modern developments in implant provision provide greater choice for patients and clinicians, and, therefore, the decision between a root canal therapy and implant treatment is a commonly occurring dilemma in practice.¹

Outcomes of dental therapy as discussed in the literature fall into one of the four categories: success, survival with intervention, survival without intervention, and failure.²

Fixed partial dentures (FPDs) have been the treatment of choice for the replacement of missing teeth for some years. The dental literature has some 7000 articles on the topic of FPDs. However, only a few number of them deal with patients' perceptions of clinical outcomes and level of satisfaction with FPD treatment. Edentulism and dental disease have been shown to affect patients adversely. Patients with the dental disease suffer from an altered self-image.³

They may be expected by others to be socially less competent and have less intellectual achievement.⁴ Dento-facial problems have known effects on patient's satisfaction with their dentition as they affect esthetics, performance, and function.⁵⁻⁷ Regarding prosthodontics, the literature is almost full with studies of patient satisfaction among complete denture wearers, although with little consensus on the factors influence it.^{8,9}

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Material and methods

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strategies had been noted down. Statistical analysis was conducted using SPSS software.

Results

Table 1: Group-wise distribution of subjects

Group	Number of subjects	Percentage
Group 1 (FPD)	50	50
Group 2 (RCT)	50	50
Total	100	100

In this study, there were total 100 subjects. There were 50 subjects in the FPD group and there were 50 subjects in the RCT group.

Table 2: Complications of Root Canal Treatment

Complications	Number of cases	Percentage
Root canal perforation	05	10
Over-instrumentation	09	18
Infection	03	06
Lack of coronal seal	08	16
Total	25	50

There were 5 cases of root canal perforation, 9 cases of over-instrumentation, 3 cases of infection and 8 cases of lack of coronal seal. 50% of the cases had complications in root canal treatment in this study.

Table 3: Complications of Fixed Partial Denture

Complications	Number of cases	Percentage
Porcelain fracture	06	12
Distortion	07	14
Occlusal wear and perforation	05	10
Fracture of crown	11	22
Total	29	58



There were 6 cases of porcelain fracture, 7 cases of distortion, 5 cases of occlusal wear and perforation and 11 cases of crown fracture. Total 58% of cases had complications of FPDs in this study.

Table 4: Comparison of success rate of FPD and RCT.

Group	Complications rate	Success rate
Group 1 (FPD)	58%	42%
Group 2 (RCT)	50%	50%

The success rate of FPDs in this study was 42% and the success rate of RCT in this study was 50%.

Discussion

The performance of any fixed prosthesis is evaluated by measuring outcomes of chewing function, esthetics, longevity, as well as technical complications. When assessing the efficiency of fixed prosthesis therapy, Anderson in 1998 showed that it is important to consider both the clinicians' as well as the patients' appraisals.¹⁰ However, important parameters such as patient satisfaction are clearly underexposed in the current literature, especially for implant prosthesis.¹¹ A recent study confirmed that implant-supported prosthesis positively influenced the patients' quality of life, the degree of satisfaction, and their ability to perform oral hygiene.¹²

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Lindquist E et al¹³ identified the failures and assessed rate for fixed partial dentures constructed 20 years earlier by general practitioners in Sweden. The original group consisted of 164 patients who had received prosthodontic treatment in 1974 comprising fixed partial dentures with at least five units. They had all been selected at random from the files of the Swedish Federal Dental Insurance Register. Twenty years later, 98 of them could be located and 72 of them agreed to participate in a clinical examination. The majority of drop-outs of the original group had died, could not be traced, or could not participate because of medical reasons. The examination focused on removed prostheses and/or units and a number of other clinically valid variables that will be reported in a forthcoming article. The 26 patients not participating in the clinical examination were interviewed by telephone. The examined participants had a total of 140 fixed partial dentures, 557 retainers, and 383 pontics still in service. When the number of failed and removed prostheses was calculated, a cumulative success rate of 65% was found, i.e., one third had been lost since 1974. There was no difference in failures between fixed partial dentures with or without cantilevers during the previous 8 years compared to the first 12 years in service. Loss of retention together with periodontal and esthetic problems, wear, and discoloration of acrylic veneers were the most frequently reported reasons for removal. The cumulative success rate for fixed partial dentures placed in 1974 was 65%. Failed prostheses had in most cases been replaced by a new fixed partial denture.

Conclusion

The success rate of FPDs in this study was 42% and the success rate of RCT in this study was 50%.

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