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RESEARCH ARTICLE

FUNCTIONAL AND ESTHETIC REHABILITATION WITH CROWNS AND FIXED PARTIAL DENTURE: A CASE RE-PORT

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Manuscript Info

Abstract

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Introduction:-

The demand for the dentist to achieve excellence in esthetics and function has driven modern advances in materials and restoration fabrication. However, patient requests for more aesthetic and biologically “safe” materials that have led to an increased demand for metal-free restorations in anterior area. The following case presentation illustrates a successful aesthetic and functional application of porcelain fused metal crowns and fixed partial denture.

CASE PRESENTATION

17 years old Saudi female, medically fit, her chief complaint was carious teeth plus pain, she did not like her smile, and she cannot eat or chew food properly. she had poor oral hygiene, multiple carious teeth, multiple restorations with recurrent caries and multiple extractions, (fig. 1). She received root canal treatments on teeth #7 and # 15 but poorly shaped and obturated (fig.2).





Fig.1:-preoperative views are showing the smile, anterior unpleasant composites, multiple caries and extractions, and multiple posterior restorations with recurrent caries.

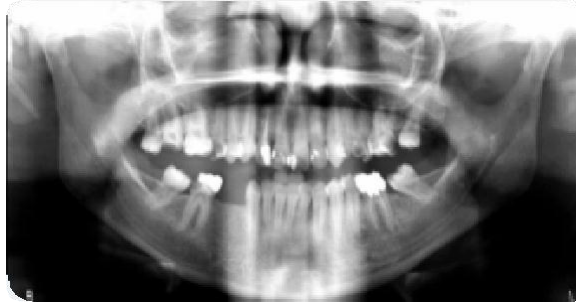


Fig.2:-Preoperative Opg Are Showing Root Canal Treatment On Teeth #7 & #15, Multiplepoorrestorationsand Mesially Tilted # 17. Periapical RI On # 20.

First treatment plan was discussed with patient to choose between implant or fixed partial denture to replace missing teeth # 28,29, the patient chose FPD because of limited resources and the need of bone augmentation. diagnostic casts and wax up was mounted on semi adjustable articulator

to study and analyze the occlusion. Clinical tests was done to all teeth with big restorations and RCT.

Oral hygiene instructions were given to the patient. Pulp extirpation of teeth with irreversible pulpitis #2, #30 was done. then Excavation and temporization of all carious teeth.

Root canal treatment was done for teeth # 2, 12, 13, 14, 4, 20 and root canal retreatment for teeth # 7, 19 (Fig.3).

Composite restorations were placed on teeth # 1,3,5,7,16,17,32 and amalgam core build up on # 14.

Osseous crown lengthening surgery was done for tooth # 2 because it has short clinical crown as shown on fig.1 RT view. Cast post and core were done for teeth # 2,4 (fig.4),12,13 (fig.5) ,19,20 (fig.6),30

(fig.7) because no enough remaining tooth structure. Then single crown preparation was refined for teeth # 2,4,12,13,19,20 and for teeth 27, 30 as abutment of 4 units FPD. Final impression was taken with irreversible hydrocolloid material after the placement of gingival retraction cord to receive porcelain fused to metal crowns and FPD and all ceramic crown for tooth # 7 (fig.8)



Fig 4:-Are showing cast post and core for teeth # 2,4



Fig 5:-Showing cast post and core of teeth # 12,13.



Fig. 6:-Showing cast post and core on teeth# 19,20.

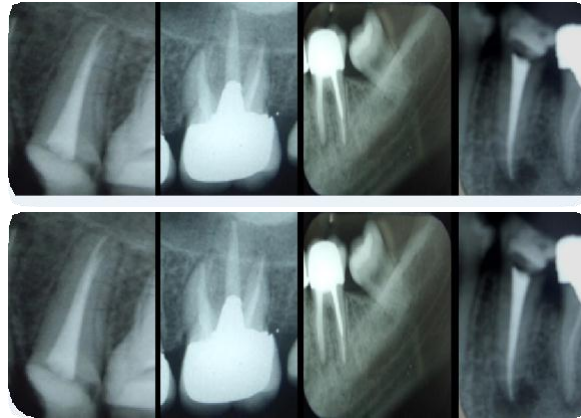


Fig 7:-Showing cast post and core on tooth # 30



Fig8:-Showing postoperative views of upper, lower ,RT,LF, and frontal with patient smile.

Discussion:-

Full ceramic crowns with opaque cores are superior in strength, with good esthetic. When restoring anterior teeth with these crowns, it is advisable to end the margin subgingivally as there could be a mismatch in shade between the tooth margin and the restoration (1).

It is difficult to make direct comparisons from cited studies to advance a clear argument in support of one treatment modality. However, it is judged that a conventional endodontic retreatment approach is the most appropriate in the first instance, providing access to the root canal is possible. This does not preclude a subsequent surgical approach. Teeth that are permanently restored soon after retreatment are more successful than those which are not. There are significant challenges in setting up prospective research studies to directly address the problem of the failed root filing (2).

With the improvement in materials, careful case selection and application of the restorative techniques, posterior composites placed under appropriate conditions and monitored routinely can be expected to last 10 years or longer (3)

Invaded the biologic width during tooth preparation can result in chronic inflammation, loss of alveolar bone, recession and pocket formation. The chronic inflammation compromises both esthetic & periodontal health. In order to keep margins of restoration supragingivally the distance from marginal bone to margins of restoration should not be less than 3 mm. Ideally the margins of restoration should be supragingivally or in the same level as marginal gingiva. When the margins of restoration are prepared subgingivally, the distance from marginal gingiva to margins of restoration should not be more than 0.7 mm. To continue dental treatment in operated area is recommended not earlier than in 4 weeks, and making restorations in esthetical area- not earlier than in 6 weeks (4).

Cast metal post-and-core foundations have a long history of successful use due to their superior physical properties (5).

Based on these 3-year outcomes, root canal treatment is considered a reliable treatment in practice routine under the conditions of the German national health insurance system suitable to salvage most of the affected teeth (6).

A 5-year retrospective study of fixed partial dentures showed that Fifty-eight (58.6%) of the FPDs were successes requiring no intervention (7).

Conclusions:-

The development of a pleasing esthetic and functional ability for the patient depends upon the dentist ability to replace the missing teeth, restore badly decayed teeth both in contour and color especially for the anterior teeth.

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