Case report: Interdisciplinary full mouth rehabilitation

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Introduction
The success of functional and esthetic restorations in a case requiring full mouth rehabilitation is often dependent on our understanding of interdisciplinary concepts. With every patient being unique and representing a special blend of age, personality characteristics as well as expectations, our knowledge of interdisciplinary concepts can open a whole range of treatment options and outcomes. Today, every dental practitioner must have a thorough knowledge of the roles of these disciplines in producing an aesthetic makeover, with the most conservative and biologically-sound interdisciplinary treatment plan.1,2

Case Report
A 57-year-old female patient reported with the complaint of mobile teeth, spacing in anterior dentition, missing bridge, and desire to restore her smile. During clinical examination, it was noted that the patient had deep periodontal pockets, missing teeth, mobile and migrated teeth. Diagnostic periapical radiograph revealed horizontal bone loss and missing teeth. Based on the clinical and radiographical evidence, it was diagnosed that the patient was suffering from generalized moderate periodontitis with trauma from occlusion. The treatment plan was made keeping in mind the end-result, harmonious with biological and functional aspects. The treatment plan involved:

- Periodontal therapy involving subgingival curettage.
- Extraction of hopeless teeth.
- Crowns and bridges on remaining teeth, along with implant-supported prostheses for missing teeth. Rehabilitation of occlusion is a crucial phase to ensure long-term oral health.
- Intentional root canal treatment was performed for remaining teeth in order to alleviate post-periodontal therapy hypersensitivity.
- Maintenance and recall.

Material options were given to the patient and a metal ceramic prosthesis was chosen.

Treatment Sequencing
Treatment was carried out in the mandibular arch followed by the maxillary arch in the following phases:

Phase 1
Subgingival curettage of the lower arch along with the extraction of lower right (LR) 1 and 2, and lower left (LL) 1, 2, and 7, followed by placement of immediate extraction implants (Xive/Frialit by Friadent, GmbH) on LR 2 (3.4 x 11), 4(3.8 x 13), 5(3.8 x 11), 6(4.5 x 9.5); LL 1(3.8 x 11), 2(3.4 x 11), 4 (3.8 x 13), 6(4.5 x 8) was done. Prefabricated provisional acrylic fixed prostheses were given after bite adjustment. During the follow-up visit, intentional root canal treatment was performed in LR 3, 4, 5, 7, and LL 5, 4, 5, 6 teeth.

Phase 2
The loading of abutment in the upper and lower arch implants was performed six months after the stage 1 surgery. LR 5 was, also extracted due to persisting mobility, hence, poor long-term prognosis. Intentional root canal treatment was performed in UR 5, 7 and UR 5, 7 to improve their prognosis and prepared to receive crowns.

After a week, subgingival curettage of the upper arch along with extraction of upper right (UR) 1, 2, 4, 5, and 6, and Upper left (UL) 1, 2, 4, and 6 followed by immediate extraction implants (Xive/Frialit by Friadent, GmbH) on LR 2 (5.4 x 11), 4(5.8 x 13), 5(5.8 x 11), 6(6.5 x 9.5); UR 1(3.8 x 11), 2(5.4 x 11), 4(5.8 x 13), 6(6.5 x 8) was done. Prefabricated provisional acrylic fixed prostheses were given after bite adjustment. During the follow-up visit, intentional root canal treatment was performed in UR 3, 4, 5, 7, and UL 5, 4, 5, 6 teeth.

Later, the final metal ceramic prosthesis was constructed. The final prosthesis, after all occlusal adjustment, was cemented using Glass Ionomer Cement. Recall appointments were given for cleaning and maintenance of the prostheses at every 6 months.

Restorative and Occlusal Considerations
The final occlusion given to the patient was Class II with anterior guidance, which

Figs. 1a-d: Pre-operative intra oral view

Fig. 1e: Pre-operative smile

Fig. 1f: Pre-operative OPG

Fig. 2a: Maxillary occlusal view after final preparation

Fig. 2b: Mandibular occlusal view after final preparation

Fig. 2c: Post-loading OPG

Fig. 2d: Post-operative intra oral view

Figs. 5b-d: Post-operative intra oral view

Fig. 3a:Post-operative intra oral view

Fig. 3b: Post-operative smile

Figs. 5a-d: Post-operative intra oral view
allowed direct axial forces and had minimized off axial forces on the implant. Discission in excursive movements was given attention. Since, upper left canine was missing and was replaced with an implant supported bridge, a group functions was advisable, whereas on the right side, canine-guided occlusion was given, since natural canines were present.

Discussion
Dental problems are often multi-factorial, and may not be satisfactorily resolved by the restorative treatment alone. Creating the perfect smile along with health is a challenging procedure that requires a multidisciplinary approach, and meticulous treatment planning. Emphasis was given on occlusal adjustments in both temporary and final restoration, since occlusal rehabilitation is the key to long-term success of the restorations and the oral health.

References