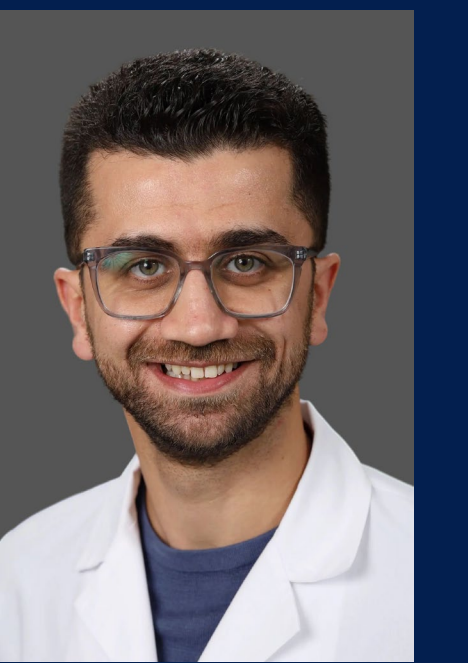




BACKGROUND

The perio-restorative approach aims to prevent and treat the violation of supracrestal tissue attachment (STA; formerly known as biologic width) in a predictable and effective manner. Nevertheless, whenever possible, it is crucial to maintain a supra-gingival margin to avoid such issues within the sulcus.

OBJECTIVE

The objective of this case presentation is to illustrate a step-by-step approach to addressing biologic width violation and over-contoured restorations in a patient who developed severe gingival inflammation following a full-mouth rehabilitation in both the maxillary and mandibular arches.

CASE PRESENTATION

"A 66-year-old female patient presented with the chief complaint of, 'My gums bleed when I brush, and they are always inflamed.' The patient mentioned that the inflammation began shortly after receiving zirconia crowns on all 20 upper and lower teeth. To rule out any allergic reactions to materials used, her previous provider conducted multiple allergy tests and replaced two crowns. Despite these efforts, the inflammation persisted. She was then referred to the University of Michigan School of Dentistry (UMSOD) for further evaluation and treatment.

- medical history; hypothyroidism and a hysterectomy.
- Medications; Synthroid
- Social history; non-smoker, moderate alcohol intake of 4-5 wine drinks per week.

Upon thorough clinical and radiographic examinations by our periodontist, the patient was diagnosed with severe gingival inflammation resulting from biologic width violation and over-contoured crowns.

We proposed the following treatment plan to address her condition:

1. Digital planning, including aesthetic wax-up and surgical guide design.
2. Surgical crown lengthening and fabrication of provisional restorations.
3. Definitive restorations delivery after the soft tissue has fully healed.

Figure 1 Illustrates the step-by-step treatment plan from the initial presentation to the final results."

RESULTS



Fig. 1; step-by-step treatment plan from initial presentation to the results.

DISCUSSION

Biologic width violation and over-contoured restorations often lead to gingival inflammation. However, it's essential to note that tissue responses can vary among individuals. In some cases, bulky crowns may not cause gingival inflammation, which could be attributed to factors like soft tissue thickness, phenotype, and the host's unique response. Therefore, it's crucial for dentists to carefully assess each patient's soft tissue condition before initiating any restorative procedures.

The human body responds to biologic width violation by undergoing bone remodeling around the restoration margins until a new biologic width of approximately 3-4mm is established. Gingival inflammation resulting from these issues can be effectively reversed by removing the causative factors, such as the crowns in question. During the healing period, temporary crowns can be created to allow the tissue to heal and mature properly. Subsequently, definitive restorations can be fabricated to ensure the patient's oral health and comfort.



SUMMARY

- **Gingival inflammation can be managed by removing causative factors and creating biocompatible restorations. The ultimate goal of any prosthodontic treatment should not only be providing aesthetics but also maintaining the health of the surrounding tissues.**

References

