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Clinical Case Study

Conservative management of inflammatory drugs: treatment combined with photodynamic therapy and periodontal gel

A 62-year-old male patient presented with significant bleeding during at-home oral hygiene in the upper left maxillary region. His medical history included arterial hypertension. Clinical examination revealed a red, exophytic lesion on the palatal side of the interdental papilla between teeth 26 and 27, along with generalized gingival inflammation due to poor oral hygiene.

A provisional diagnosis of pyogenic granuloma or inflammatory epulis was made, and an excisional biopsy was scheduled. After administering local anesthesia with mepivacaine and epinephrine (1:100,000), the lesion was conservatively removed and sent for histological examination. Ten days later, the diagnosis confirmed an inflammatory epulis with highly vascularized tissue and no cellular atypia.

Post-excision, the site was treated with photodynamic therapy using a 1% methylene blue derivative and a 660 nm diode laser (Helbo System) to decontaminate the remaining gingival tissue. One week later, while inflammation had resolved, a loss of interdental papilla tissue was observed, resulting in both aesthetic and functional concerns.

To address this, a dual-component periodontal gel containing spermidine and hyaluronic acid (Ubigel Inperio) was generously applied to the affected and adjacent gingival papillae. After one month—without tartar removal or additional at-home treatments—a tissue regeneration of approximately 2 mm was observed in the interdental area.



Fig. 1: exophytic sessile erythematous lesion in the papilla interdental between 26 and 27

Fig. 2: Healing of gingival tissues after removal of the inflammatory epulide (note the presence of tissue erythematous distal to 26)



Fig. 3: Application of the photosensitizer based 1% methylene blue derivative, left to act 3 minutes before the lighting

Fig. 4: Activation of the photosensitizer with diode light 660 nm, 100 mwatt for 5 minutes





Fig. 5: disappearance of the erythematous area but presence of inversion of the periodontal gingival architecture

Fig. 6: application of periodontal gel based on spermidine and hyaluronic acid (Ubigel Inperio, Pierrel).



Fig. 7: Regeneration of gingival tissue in the interdental papilla at one month follow-up

Conclusion:

This case suggests that such gels may play a valuable role not only in periodontal regeneration but also in restoring gingival tissue following oral pathology biopsies. However, further studies with larger patient samples are needed to validate these promising preliminary results.