Reconstructive Periodontal Therapy of a compromised tooth beyond the apex – Clinical Case

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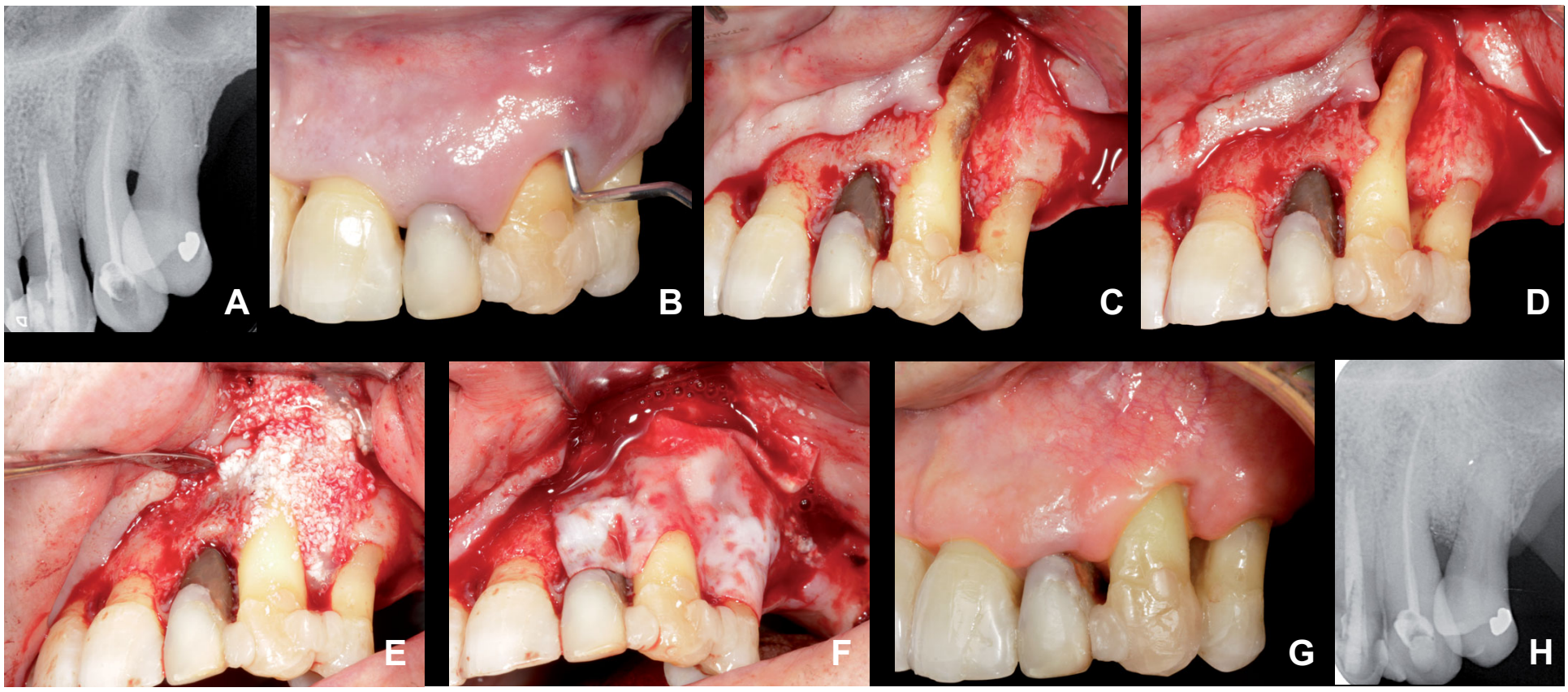
Case Descripton

Male patient, 68 years of age, non-smoker, with type II diabetes *mellitus*, showed-up in the appointment with complaints of recurrent abscesses on the tooth 23. After periodontal assessment and radiographic examination (panoramic + periapical radiography), a total loss of the buccal insertion on the tooth 23 was observed, with Probing Pocket Depths (PPD) of 6mm in (MV), ≥12mm in (V) and ≥ 12mm in (DV), degree III mobility, not detecting, however, increased PPD´s on the adjacent teeth. After non-surgical periodontal treatment, followed a discussion about the several therapeutic options, being selected the Reconstructive Periodontal Therapy (RPT) with Enamel Matrix Derivatives (EMD), bone substitute (Bio-Oss) and resorbable membrane (Bio-Gide). Previous to surgery, the tooth 23 was endodontically treated and splinted to the neighboring teeth. Postoperative recommendations and a prescription of amoxicillin (875mg) + clavulanic acid (125mg), paracetamol (1g), ibuprofen (600mg) and a 0,12% chlorhexidine mouth rinsing were given. The aim of this clinical case is to describe, step-by-step, the entire surgical process performed, as well as, to illustrate the initial and the 11th month follow-up condition.



(A): Baseline periapical radiograph after endodontic treatment of the tooth 23. (B): Baseline picture of the tooth 23 (V) splinted to the adjacent teeth showing probing pocket depth at the central point. (C): Flap elevation with access to the defect (D): Mechanical root debridement. (E): Defect filling with EMD (Enamel Matrix Derivatives) and bone substitute (Bio-Oss). (F): Resorbable membrane (Bio-Gide) in place. (G): 11th month control picture. (H): 11th month periapical radiograph.

Discussion: Teeth related to infra-bony defects with deep periodontal pockets became a clinical challenge. There are several therapeutic approaches, however, RPT has proven to be suitable in the retention and healthy maintenance of the teeth, with good long-term results. It's a conservative treatment, although it demands a very strict periodontal protocol and its crucial to manage the risk factors at every step.

Conclusion: RPT can be successfully used on hopeless teeth associated with infra-bony defects to or beyond the apex and has potential to modify the dental prognosis. The mid-term results are promising, however, further scientific evidence in this field is required. Therefore, it presents as a viable alternative procedure to severely compromised teeth from a periodontal point of view.

Keywords

Infrabony defects
Reconstrutive surgery
Periodontal regeneration
Prognosis
Hopeless teeth

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