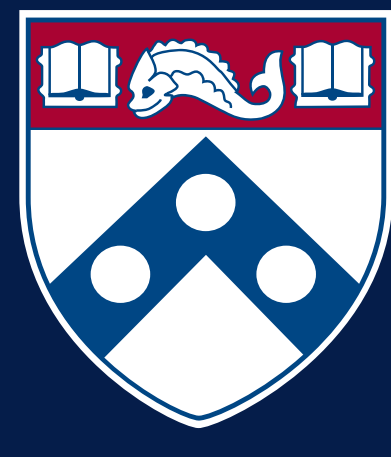




OUTCOMES OF PERI-IMPLANTITIS TREATMENT IN A DENTAL SCHOOL SETTING: A RETROSPECTIVE REVIEW

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Background

Implant placement for an edentulous region is quickly becoming a favored treatment modality. While this procedure offers a fixed prosthetic solution to an ideal edentulous ridge, it is important to consider the additional risks of peri-implant diseases, as they are common and difficult to treat. Moreover, a consensus on how best to treat peri-implant diseases, and specifically peri-implantitis does not yet exist. Current evidenced-based interventions range from non-surgical to surgical therapy to full explantation.

Currently, the gold standard method of treating peri-implantitis involves the non-surgical phase and the surgical phase. When entering the surgical phase of peri-implantitis treatment, it is important to establish the goal of treatment prior to raising a flap. In combination with the patient's wishes, ability to perform proper home care, along with the current prosthesis and anatomy of the bony defect, a treatment objective can be established, whether it is resective or regenerative in nature.

The aim of this retrospective study is to assess the success of various modalities of peri-implantitis treatment in the dental school setting as well as in the school's faculty practice.



Figure 1. Implant diagnosed with Peri-implantitis prior to treatment



Figure 2. 9 month post-operative radiograph following peri-implantitis regenerative therapy

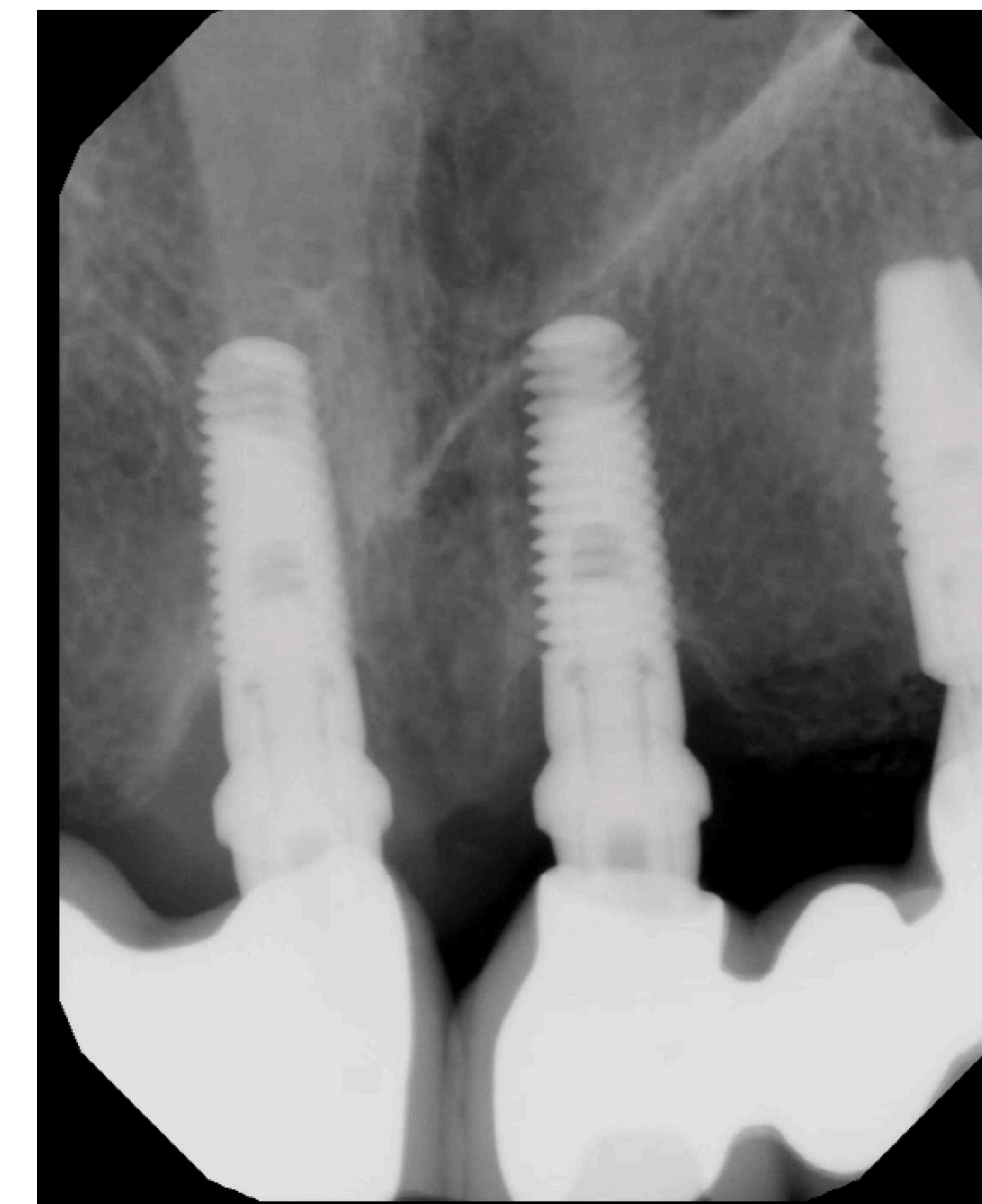


Figure 3. Implants diagnosed with Peri-implantitis prior to treatment

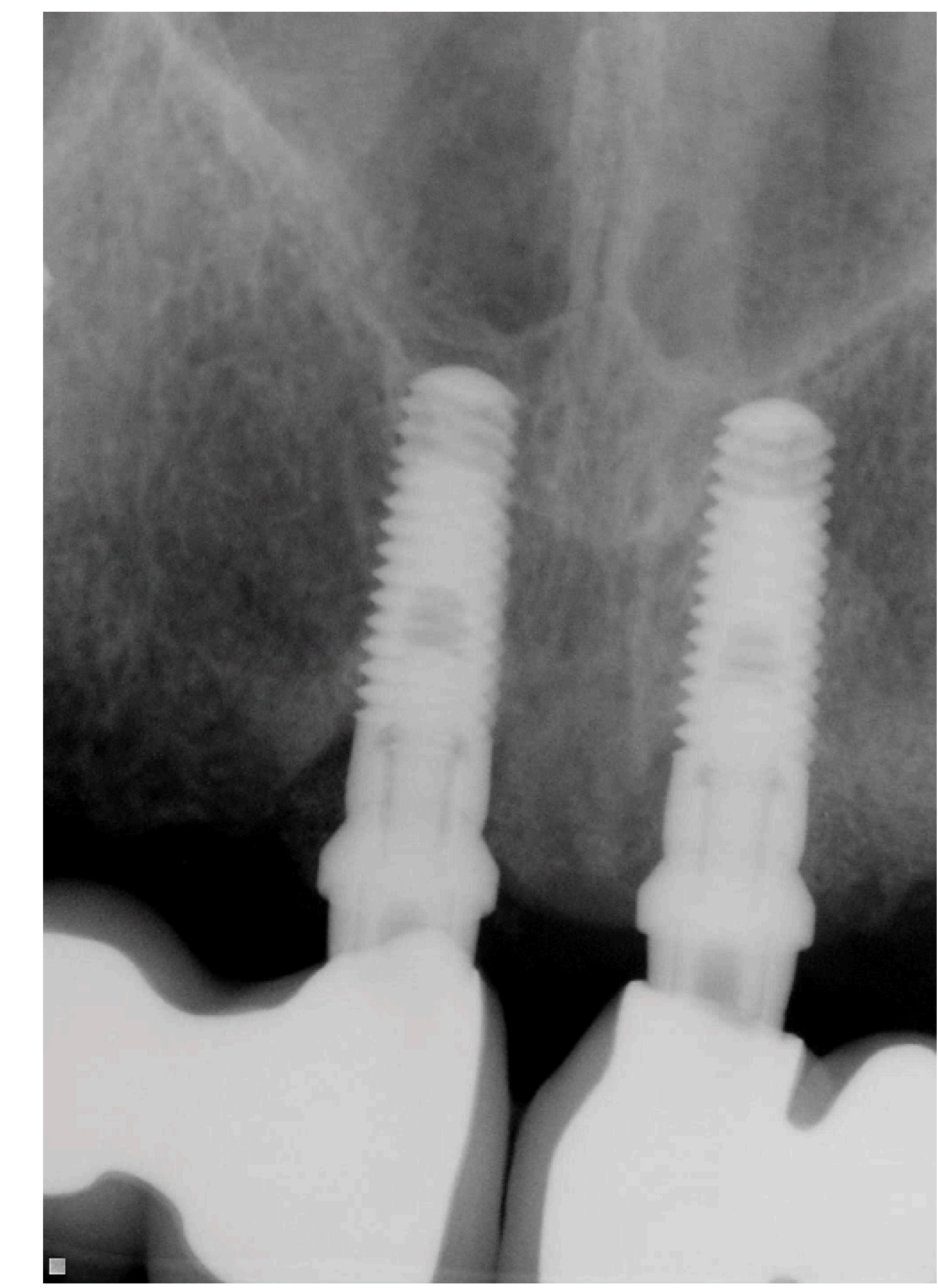
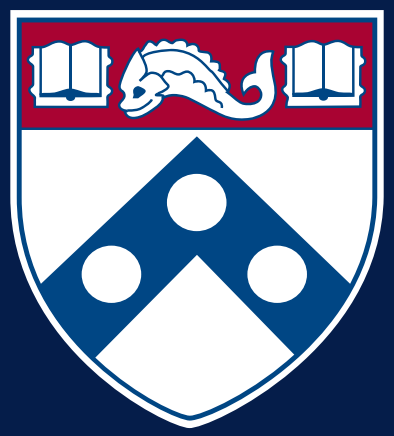


Figure 4. 12 month post-operative radiograph following peri-implantitis regenerative therapy



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Materials and Methods

A retrospective review of dental records for 102 implants diagnosed with peri-implantitis was completed. The implants diagnosed with peri-implantitis were treated in both the Post-Graduate Periodontal Clinic and Faculty Practice. This review includes patients with one or more implants treated for peri-implantitis between 2016 and 2022. The following medical and dental records are evaluated through electronic health records: gender, age, medical histories, implant position, modality of treatment, chemotherapeutics used, method of decontamination, status of the implant after treatment, and probing depth value.

Results

Of the 69 patients included, there were 102 implants diagnosed with peri-implantitis. The age of patients included ranged from 28-89, with the average age being 67. 85% of patients were classified as ASA II. 86% had a previous history of periodontal disease, 24% reported tobacco use, 13% reported a history of diabetes and 50% reported a history of hypertension. 76 implants were treated for peri-implantitis in the post-graduate periodontal clinic and 26 were treated in the faculty practice. Out of 7 failures, 5 were lost in the post-graduate periodontal clinic and 2 were lost in the faculty practice. 77% of implants received non-surgical therapy prior to entering phase II treatment, with 19% concomitantly receiving local antibiotic therapy. 71% of surgical peri-implantitis treatments were regenerative in nature and 13% were resective, with neither method employed in 17% of cases (i.e., only open flap implant debridement). In terms of the regenerative procedures: 25% were treated with GEM21, 3% were treated with Emdogain and 3% were treated with PRF. 38% of regenerative procedure were grafted with Xenograft and 33% grafted with Allograft. 63% of implants remain back in function after treatment, with 12% are ailing and 7% failed. 20% of implants are unaccounted for due to loss of follow-up or the implant is awaiting second stage surgery.

Conclusions

Within the limitations of this study, surgical regenerative therapy (defined as the use of a bone graft material and/or membrane with or without the use of biologics) of implants diagnosed with peri-implantitis will lead to successful outcomes (implant back in function) for patients and implants diagnosed with peri-implantitis. The logistic regression model will be used to further analyze the outcomes of various surgical treatment modalities of peri-implantitis.

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