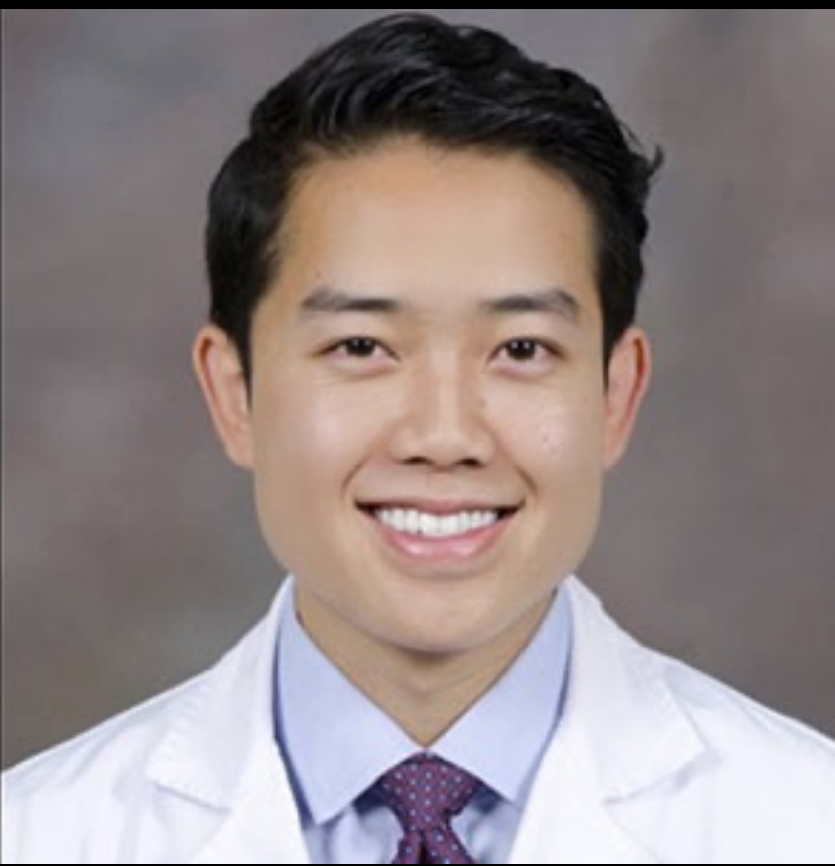


Peri-implantitis Prevalence and Effect of Supportive Periodontal Therapy on Outcomes

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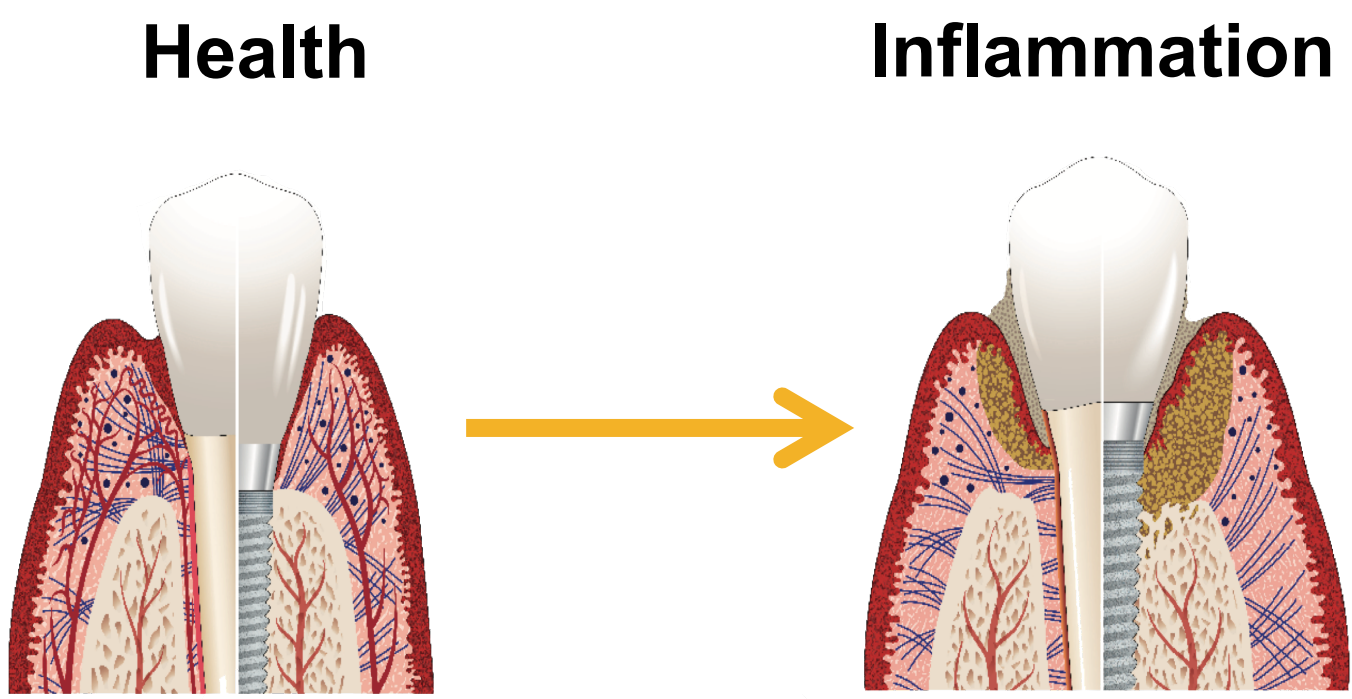


Introduction

Inflammation

- Inflammation is a protective response involving immune cells, blood vessels, and molecular mediators
- The etiology of this disease involves a microbial challenge_{1,2} or/and a foreign body reaction₃
- Excessive quantities of destructive enzymes, inflammatory mediators, and immunopathology
- Periodontitis is an inflammatory disease with an infectious etiology

Figure 1.:Transition from health to a diseased periodontium in a tooth and an implant model₄



Case Definition Per-mucositis & Peri-implantitis₆

- Health
 - Absence of erythema, bleeding on probing, swelling and suppuration
- Peri-implant mucositis
 - No progressive bone loss with bleeding on gentle probing. Erythema, swelling and/or suppuration may also be present.
- Peri-implantitis
 - Progressive bone loss with bleeding on gentle probing. Erythema, swelling and/or suppuration may also be present.
- Failure
 - Implant necessitating removal

Objective

To examine the prevalence of peri-mucositis and peri-implantitis in an academic setting and its relationship to supportive periodontal maintenance.

Materials and Methods

Study Population

- N=269 patients and 368 implants in an academic setting
- Patients from Richmond, VA

Supportive Periodontal therapy Frequency₅

- Regular Compliance = 3- to 6-month recall interval ($\pm$ 2 SPM/year)
- Erratic Compliance = 7- to 12-month recall interval (<2 SPM/year)
- Non-Compliant = no recall interval program (no SPM/year)

Retrospective analysis

- Retrospective chart review from 01/2013-1/20/20 random sampling
- Diagnosis of each implant recorded in chart: age, site, implant type, size, restored, occlusal guard , systemic health, implant disease and implant failure.

Statistical Methods

- SAS version 15.2 was used for data analysis.
- Two-sided Student’s t-tests were used to analyze sex differences.
- Fisher’s exact test was used to analyze the associations between the supportive periodontal maintenance, peri-mucositis and peri-implantitis

Results

	Sex		History of Periodontal disease				Diabetes		Smoking		Recall frequency			Peri-implanti tis	
	M	F	Healt h	Mild	Moder ate	Seve re	DM2	None	Yes	No	RC	EC	NC	Ye s	No
N=	163	106	187	23	23	34	38	205	41	228	119	64	186	20	24 9
Percent of total	39%	61%	70%	9%	9%	13%	16%	84%	15%	85%	32%	17%	50%	7%	93 %

Figure 2. Summary of Findings



Figure 3. Peri-implantitis and early implant failure analysis left to right by 1) PIMT vs no PIMT 2) RC vs EC vs NC 3) recall frequency and 4) stratified by sex

Discussion and Conclusion

We report that supportive periodontal maintenance frequency is associated with implant failure and peri-implantitis. While limited by a small sample size, these results suggest that regular supportive periodontal maintenance of at least 6 months of supportive periodontal maintenance to maintain peri-implant health.

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