

ORAL HEALTH AND DIABETES



Understanding the synergism

OBJECTIVES



- ❧ Recognize common disorders of the mouth that occur in diabetic patients.
- ❧ Understand the physiologic and bacteriologic impact of poor oral health on serum glucose control and the sequelae of diabetes.
- ❧ Recognize the importance of incorporating oral health screening and maintenance in the management of diabetic patients.

Common Oral Sequele of Diabetes



Periodontal disease
Dental caries
Xerostomia
Fissured tongue
Parotid swelling
Candidiasis
Oral infections



HEALTHY PERIODONTIUM
No erythema, bleeding, minimal plaque no calculus

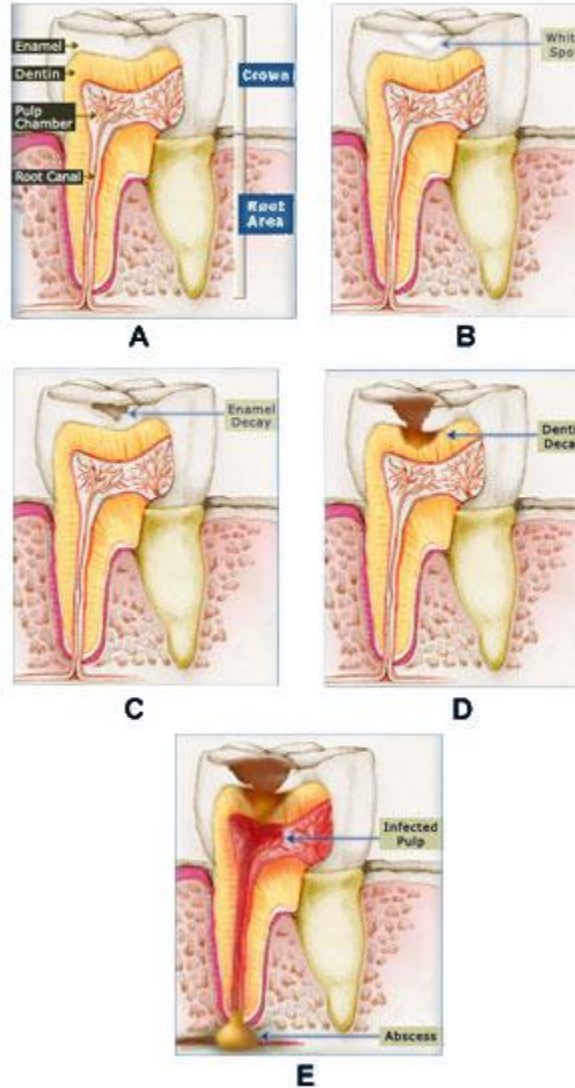
GINGIVITIS
Bacterial plaque with reversible localized inflammation Gingival attachment remains intact

PERIODONTITIS
Increase of gram - bacteria; secretion of $\text{TNF-}\alpha$, $\text{IL-1}\beta$, and metalloproteinases. Loss of gingival attachment and bone height

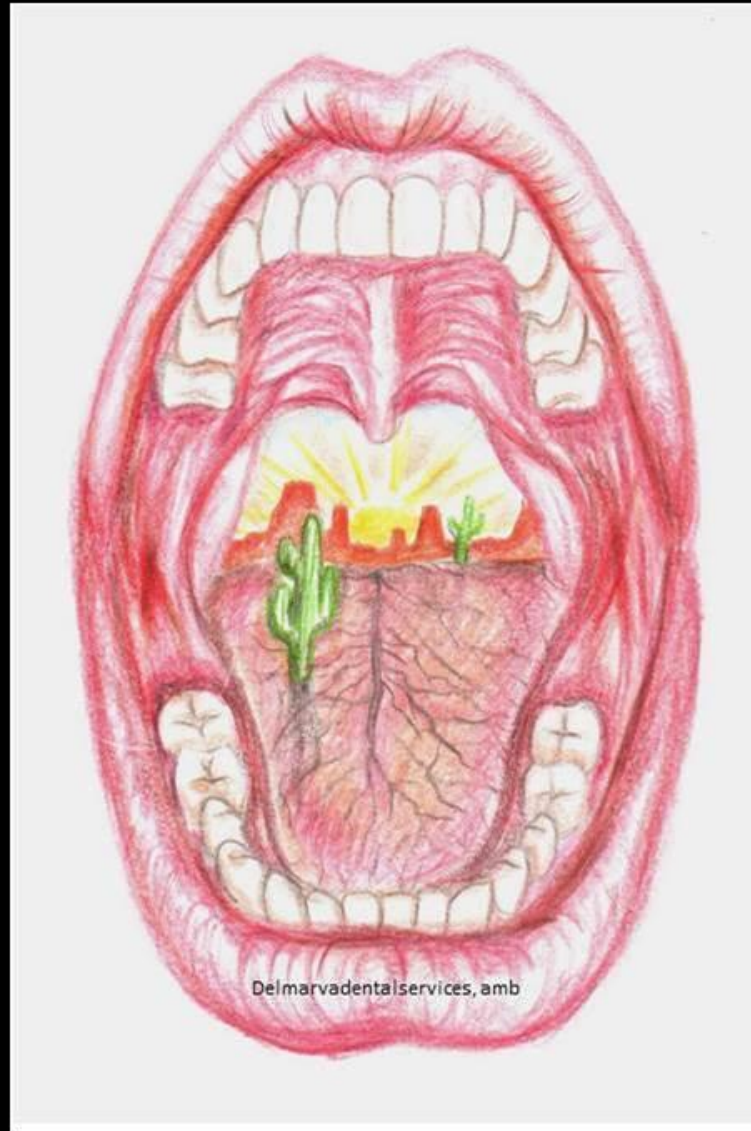
ADVANCED PERIODONTITIS
Continued loss of gingival attachment and bone from processes above. Loss of affected teeth

DENTAL DECAF

The Tooth Decay Process



XEROSTOMIA



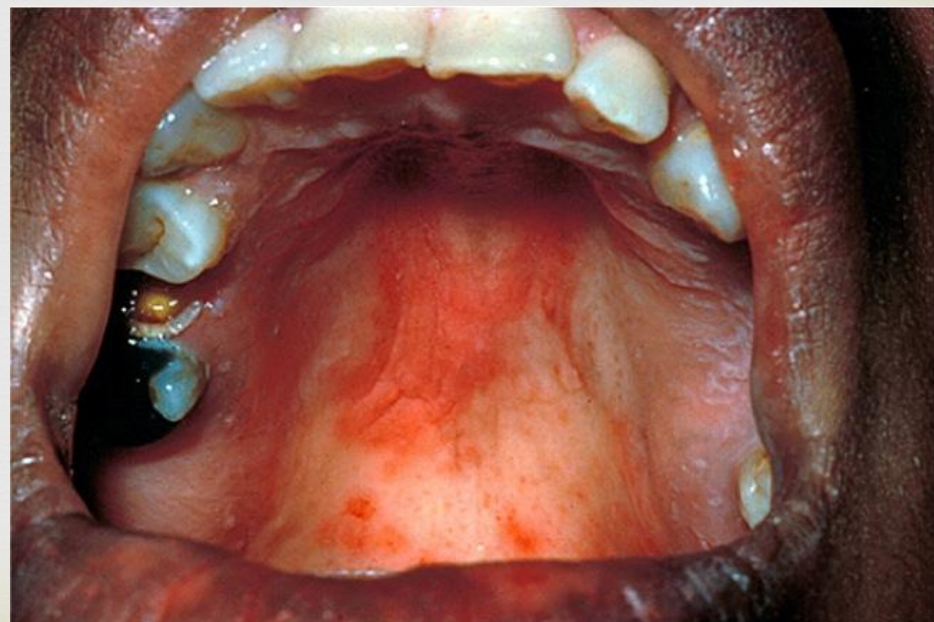
FISSURED TONGUE



SIALOSIS



CANDIDIASIS

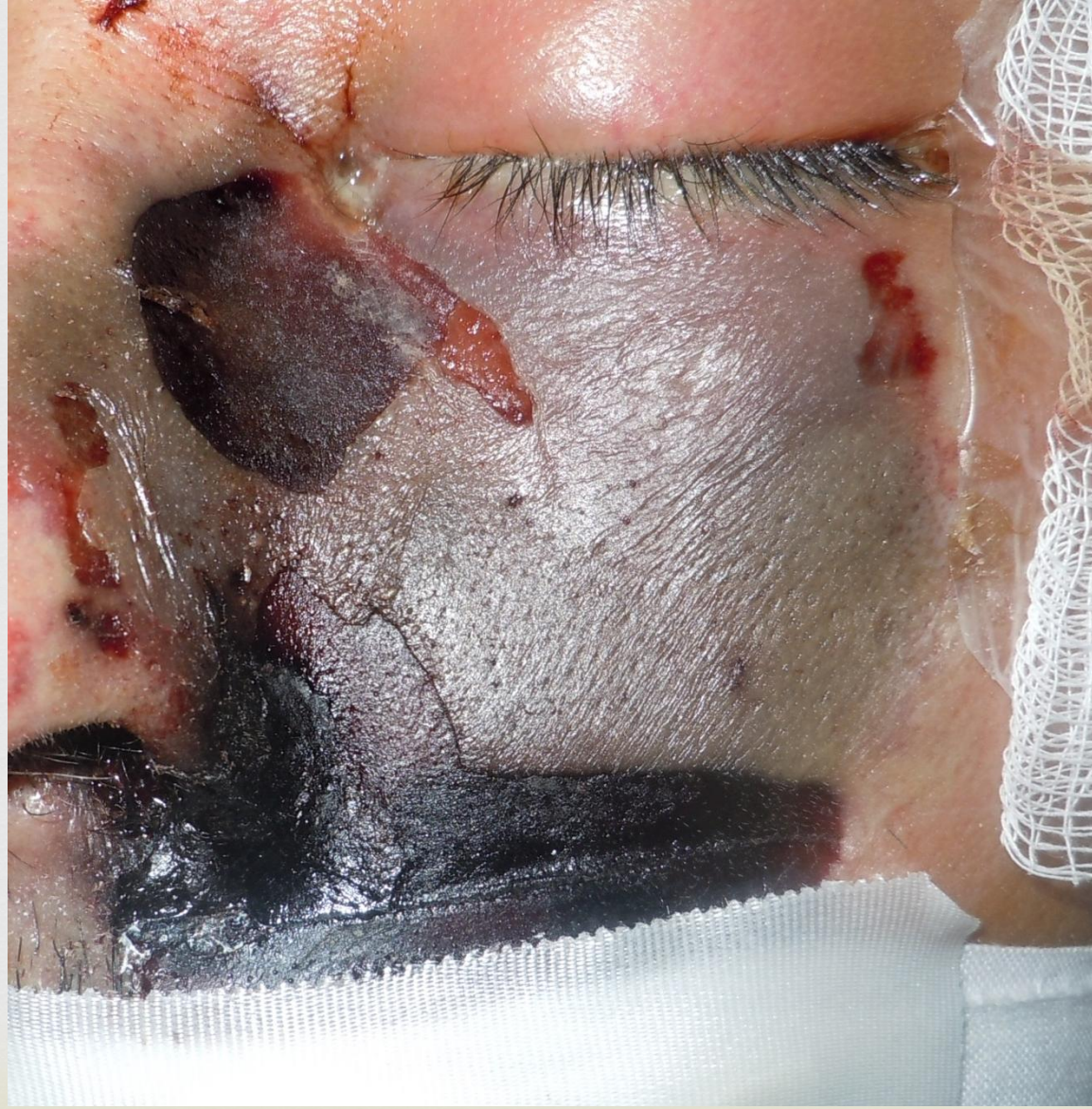


INFECTIONS

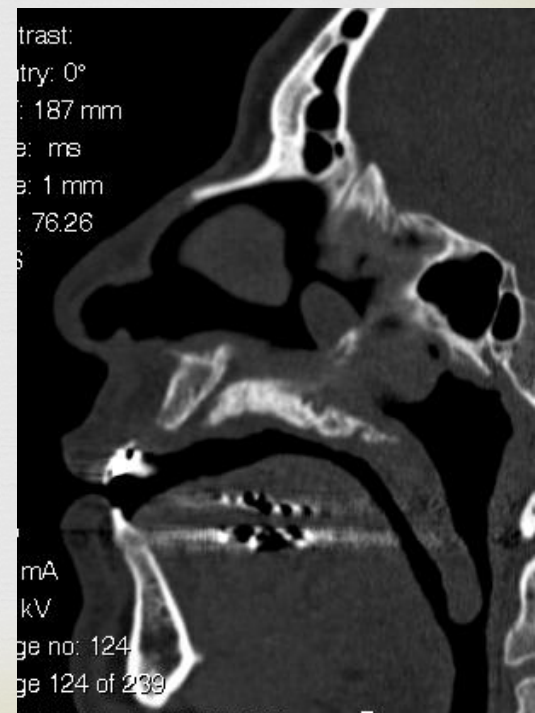
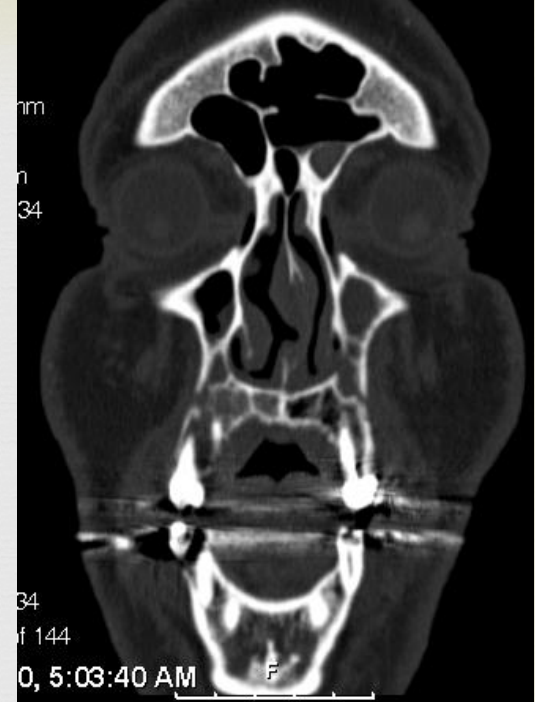
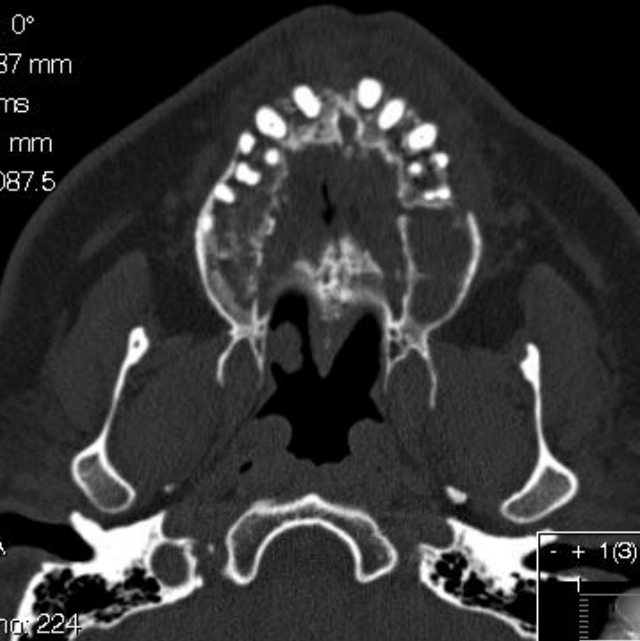


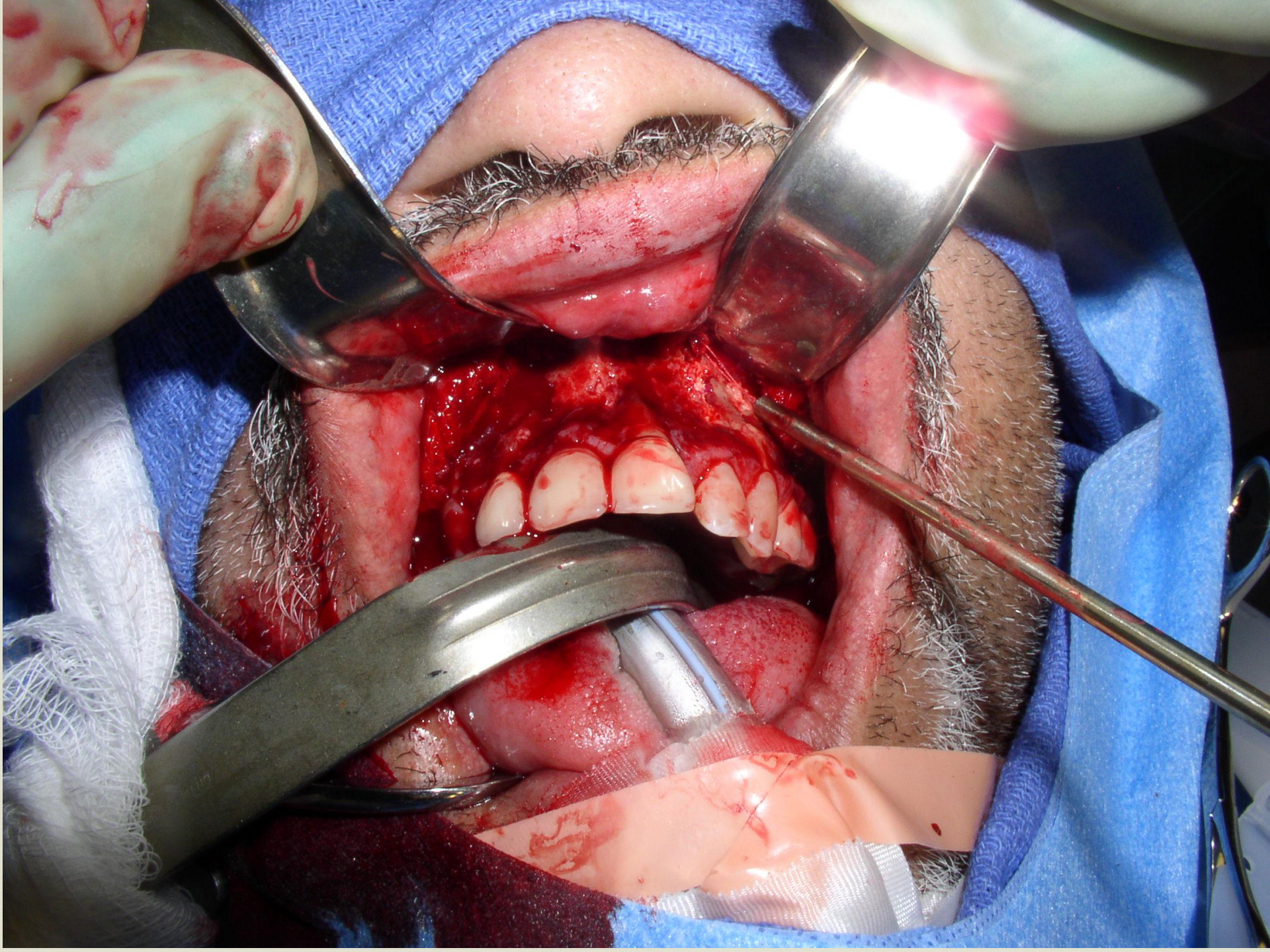
**SOME SCARRY
BAD STUFF**

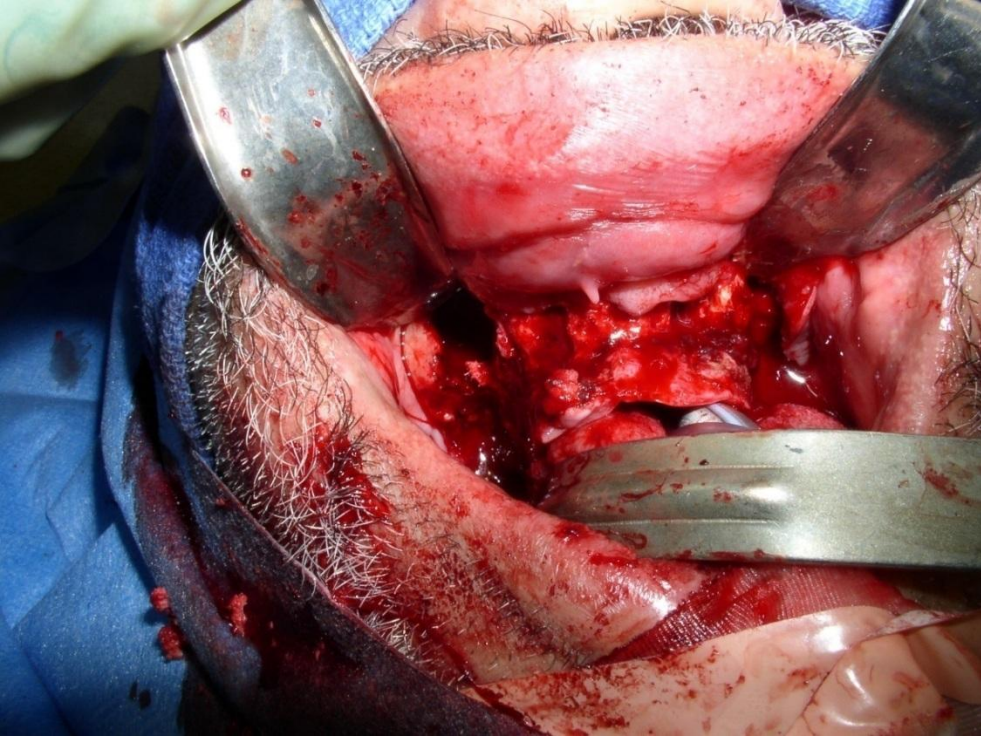
MUCORMYCOSIS











DESCENDING NECK INFECTIONS





SYSTEMIC SEQUELE OF ORAL DISEASE IN DIABETICS



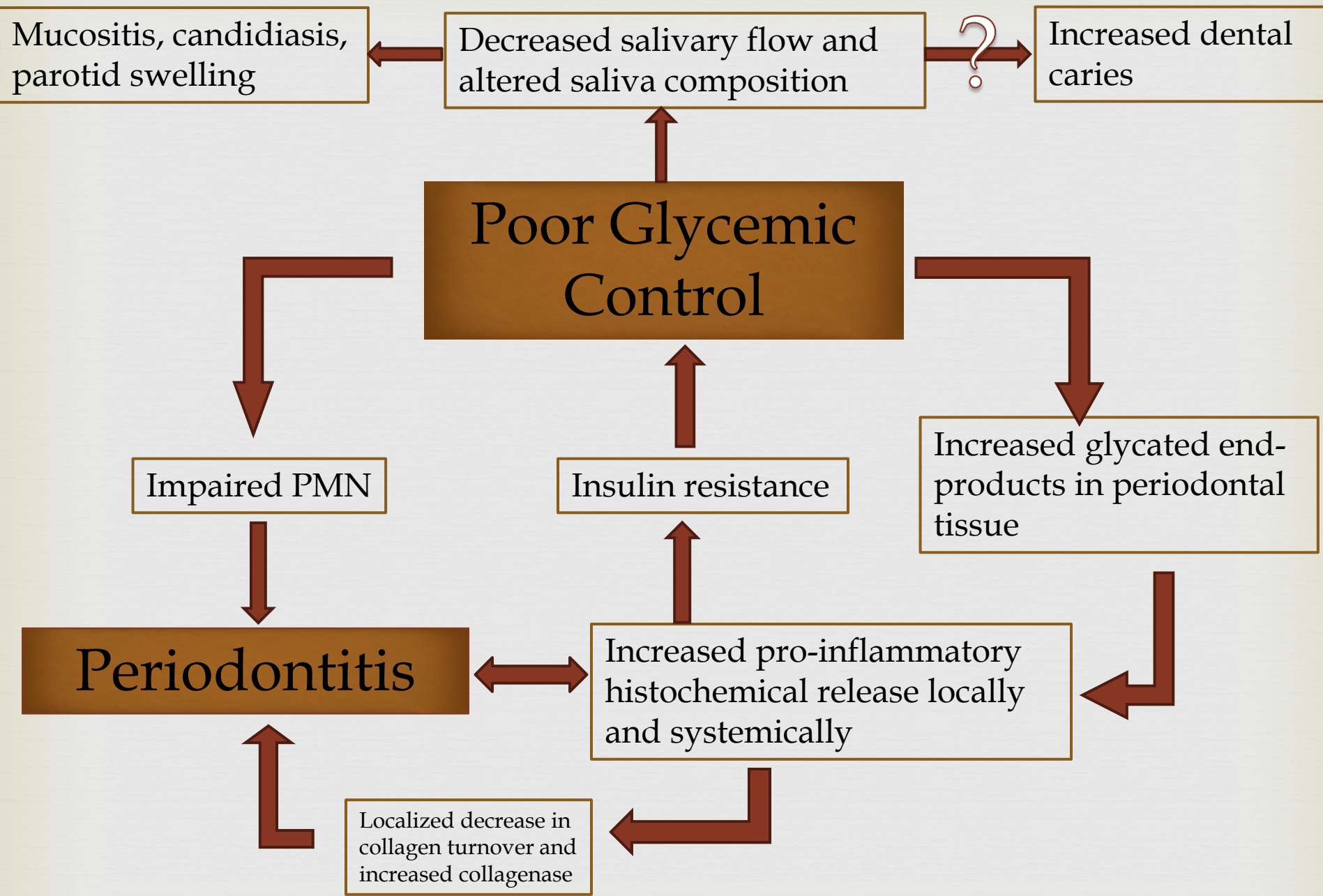
BI-DIRECTIONAL (SYMBIOTIC)
RELATIONSHIP

IS IT TRUTH OR MBE?



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SYSTEMIC SEQUELE OF INFLAMMATION

- ⌘ Higher Hgb A1-c
- ⌘ Difficulty of serum glucose control
- ⌘ Increased risk of heart disease
- ⌘ Increased risk of peripheral vascular disease
- ⌘ Increased risk of renal failure
- ⌘ Oral disease and nutrition

EVIDENCE



- ❧ M. Soell et al.: The oral cavity of elderly patients with diabetes / *Diabetes & Metabolism* 33(2007) S10-S18
- ❧ Saes Busato et al: Association between metabolic control and oral health in adolescents with type I diabetes mellitus / *Oral Surgery Oral Medicine Oral Pathology* 2010;109:e51-e56
- ❧ W.J. Teeuw et al.: Effect of periodontal treatment on glycemic control of diabetic patients: a systematic review and meta-analysis / *Diabetes Care* 2010; 33(2): 421-427
- ❧ I Chapple: The impact of oral disease upon systemic health- Symposium overview / *Journal of Dentistry* 31(2009)S567-S584
- ❧ A. Gurav: Periodontal therapy - An adjuvant for glycemic control / *Diabetes & Metabolic Syndrome: Clinical Research & Reviews* 6 (2012) 218-223
- ❧ C. Yen et al.: Relationship between Metabolic Scores, Systemic Inflammation, Renal Function, and High-risk Peripheral Arterial Disease / *International Journal of Gerontology* XXX (2012) 1-5
- ❧ M. Rosner et al.: The Role of Inflammation in the Cardio-Renal Syndrome: A Focus on Cytokines and Inflammatory Mediators / *Seminars in Nephrology*, Vol 32, No 1, January 2012, pp 70-78
- ❧ G. Engstrom et al: Inflammation-sensitive plasma proteins are associated with increased incidence of heart failure: A population based cohort study / *Atherosclerosis* 202 (2009) 617-622

WHAT TO DO ABOUT IT



- ❧ Increased awareness of oral complications of diabetes
- ❧ Increased awareness of systemic effects of oral disease
- ❧ Education of patient population of the importance of oral health in diabetes
- ❧ Education of the public at large of the importance of oral health in maintaining systemic health
- ❧ Periodontal screening in diabetic patients
- ❧ Referral of patients to dental professional?

QUESTIONS?

