

INTRODUCTION

Chronic diseases are very common in the general population, particularly in minorities. The top 5 chronic diseases at Howard University have led us to compile the dental public health concerns associated with these chronic diseases. When treating patients with existing chronic diseases, it is important that dental management and oversight must be altered and expanded to successfully treat the individual patient. Lack of attention to detail may result in prolonged bleeding, poor healing, and increased infection rates.

ORAL MANIFESTATIONS OF CHRONIC DISEASES

Chronic Diseases/Conditions in Howard University (HU) Patients	Oral Manifestation
Heart Failure (CHF)	Periodontal Disease, Bleeding gums
Diabetes	Periodontal Disease
Kidney Disease	Hyperpigmentation, Bleeding Gums
Oral Cancer	Oral Lesions, ↑ root caries
Substance Abuse (Tobacco & Alcohol Use)	Stain, Periodontal Disease, Oral lesions
HIV	Oral lesions, Candidiasis, Periodontal Disease
Other (Liver, Thyroid)	Periodontal Disease
Porphyria	Bleeding gums
Hepatitis	Periodontal Disease
Asthma	Cracked lips
Sinusitis	Pain in the posterior areas of maxillary teeth
Stroke	Periodontal Disease, Petechiae
Hypertension	Periodontal Disease
Pace Maker (Side Effects)	Periodontal Disease

DENTAL MANAGEMENT

- The importance of the collaboration between the dental/medical team provides the patient with the most optimal quality of care and minimizes complications. Dental treatment complications can affect different body systems including but not limited to cardiovascular disturbances, stroke, TMJ problems, endocrine system alterations, infections and episodes of severe pain.
- Chronic diseases can sometimes alter anesthesia processes for certain dental procedures.
- Patients with severe chronic diseases are usually provided local anesthetic as the preferred method because it does not lower the oxygenation of blood (Seitz, et al, 2019; Smith et al. 1987).
- Before general anesthesia is induced in a patient with chronic diseases proper hemoglobin levels should be obtained. This should be accomplished 10 to 15 days before the operation. For children with sickle disease, optimum hemoglobin levels obtained after blood transfusions (Smith et al. 1987).

RECOMMENDATIONS

- It is recommended that Howard University College of Dentistry students work closely with Faculty and staff to obtain detailed information regarding the patient's medications & medical history of the patients.
- Patients with chronic disease require consults with the patient's hematologist, cardiologist, internist, and other specialist. When treating a patient, it is important to go the extra mile in ensuring patient safety.

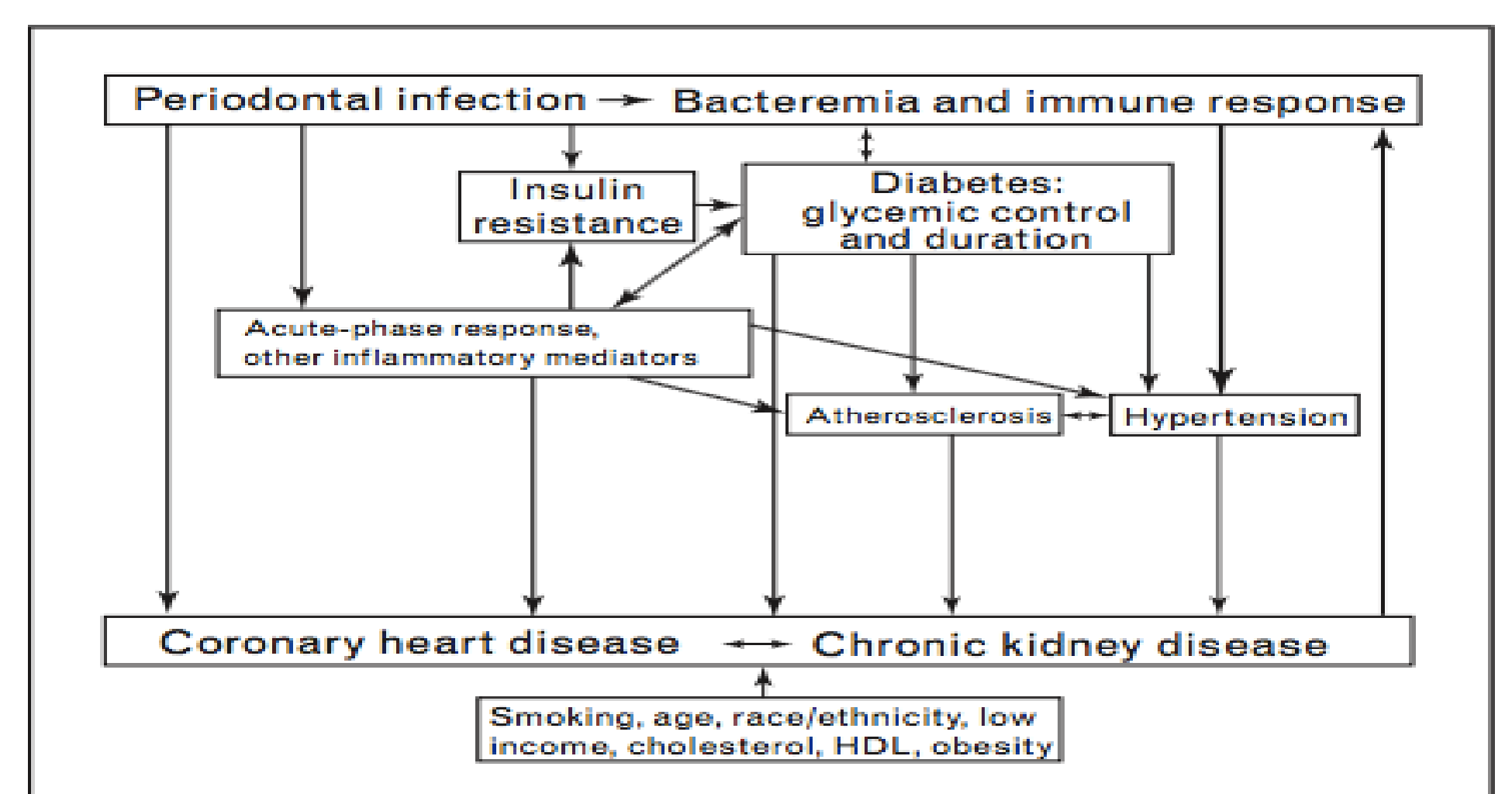
MEDICAL CONSULTATIONS

- Chronic diseases are very common in the general population, particularly in minorities. The top 5 chronic diseases at Howard University have led us to compile the dental public health concerns associated with these chronic diseases. When treating patients with existing chronic diseases, it is important that dental management and oversight must be altered and expanded to successfully treat the individual patient. Lack of attention to detail may result in prolonged bleeding, poor healing, and increased infection rates.
- Medical consultations also assist in early prevention of complications prior to the start of dental procedures. Possible complications during or following a dental procedure include but are not limited to: serious infections, dental caries, allergic reactions, increased risk of periodontal disease, slow healing, prolonged bleeding, extensive loss of teeth, etc.
- Not only is the well-being of the patient being monitored during the dental procedure, but the medical consultation also helps to minimize post treatment complications.

COMMON FINDING

According to *Pediatric Dentistry*, "monocytes and macrophages activated by periodontal inflammation enter vessel walls and produce cytokines that further increase inflammatory responses and propagate" heart diseases (Nosarti, 2013). These processes worsen overall dental health and overall systemic health.

PERIODONTAL DISEASE AND CHRONIC DISEASES



Fisher, M., (2010), *Current Opinion Nephrol Hypertension*, 19(6):519-526

CONCLUSION

- Disadvantaged patients may not know of existing chronic diseases, or have visited a physician every 5 years
- Dental students & Dentists are on the front line to diagnose many chronic diseases based on oral symptoms in children & adults and infections can exacerbate chronic conditions such as: diabetes, hypertension and other cardiac issues
- If the patient presents with a chronic disease, it is important to complete a medical consult with medical professionals prior to completing a treatment plan or providing extensive dental treatment.