

Systemic Diseases and Oral Health



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KEYWORDS

- Chronic illnesses • Diabetes mellitus • Cardiovascular diseases
- Systemic complications

KEY POINTS

- Oral disease management is more complex in patients with several systemic diseases.
- Severe periodontitis adversely affects diabetes control.
- Additional considerations exist for diabetic patients in a dental office setting.
- Osteoarthritis of the hands reduces manual dexterity and constrains the patient's capability of maintaining adequate oral hygiene.

INTRODUCTION

Several new studies have shown that an association exists between oral diseases and systemic chronic diseases. Inflammation has additionally been recognized as the key factor that connects many of these diseases.¹ Chronic diseases are defined as long-lasting illnesses, with duration of more than 3 months that affect a person's life and require constant medical treatment. Chronic diseases more frequently affect aging individuals; 80% have one chronic condition, and 50% have at least 2 conditions.² Chronic conditions are the leading cause of death and disability in the United States. According to the National Vital Statistics, the 10 leading causes of death among the 65-years-and-over age group are heart diseases, malignant neoplasm, chronic lower respiratory diseases, cerebrovascular diseases, Alzheimer diseases, diabetes mellitus (DM), influenza and pneumonia, nephritis, unintentional accidents, and septicemia.³ The authors have chosen to select cardiovascular diseases (CADs), hypertension,

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diabetes, arthritis, osteoporosis, and stroke to discuss in this article. Their connection to oral health is highlighted and oral recommendations are provided. Aspiration pneumonia and cognitive impairment of older adults are discussed in the articles written by Drs Scannapieco, Shay, Brennan, and Strauss.

Fig. 1 shows the percentage of elder individuals affected by one or more chronic diseases.

The complexity of dental treatment in the elderly is greater because of the effects of these chronic diseases, the medications prescribed, and their adverse effects. Systemic diseases can influence oral health, and oral health has an impact on overall health. Social interactions, self-esteem, dietary choices, and nutrition are enhanced by good oral health.

It is important for oral health professionals to understand and recognize the impact of systemic diseases on oral health. With this expanded knowledge, they will be better able to recommend adequate prevention mechanisms and design appropriate oral health treatment plans.

DM

DM is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. There are 2 main types of diabetes.

- Type 1 diabetes, or insulin-dependent diabetes mellitus (IDDM), is an autoimmune disease that causes the destruction of the insulin-producing β -cells in the pancreas.⁴ IDDM is primarily seen in children and younger adults and accounts for approximately 5% of diabetes cases.
- Type 2 diabetes, or noninsulin-dependent diabetes mellitus (NIDDM), is characterized by resistance to insulin and inadequate production of insulin.⁵ NIDDM is the most common form of diabetes seen in adults, accounting for between 90% and 95% of cases.

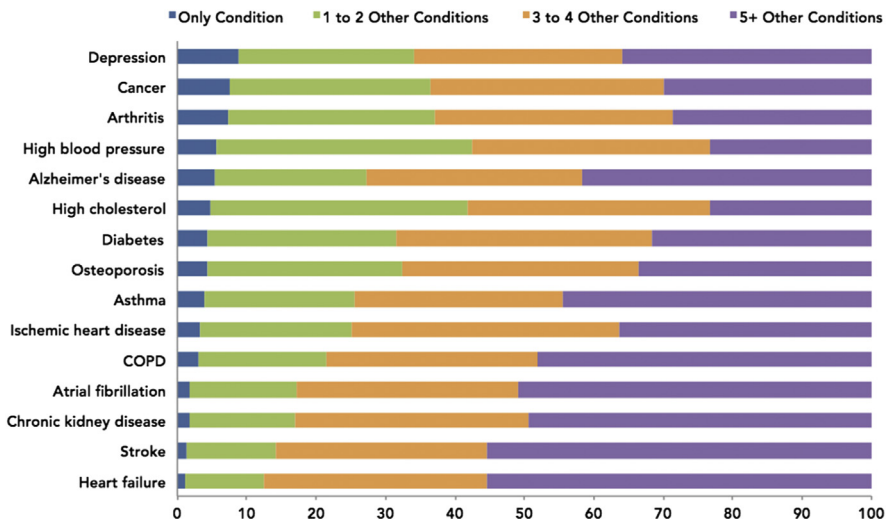


Fig. 1. Co-morbidity among chronic conditions for Medicare fee-for-service beneficiaries, 2010. (From Centers for Medicare and Medicaid Services. Chronic conditions among Medicare beneficiaries. Available at: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Downloads/2012Chartbook.pdf>. Accessed June 13, 2014.)

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