

Diabetes Weds Oral Infection: An Unhappy Marriage

Preetinder Singh

Department of Periodontology and Oral Implantology, Swami Devi Dyal Hospital and Dental College, Barwala, Haryana, India

Address for correspondence: Dr. Preetinder Singh, Department of Periodontology and Oral Implantology, Swami Devi Dyal Hospital and Dental College, Barwala, Haryana, India. E-mail: preetinder.perio@yahoo.com

Dear Editor,

On reading various articles related to diabetes in your esteemed journal,^[1-3] I would like to add the importance of oral infections associated with diabetes.

Diabetes mellitus (DM) is a chronic disease with serious long-term debilitating complications and no known permanent cure. The relationship between oral health and diabetes has been extensively studied, particularly with respect to periodontal disease and to a lesser extent, dental caries. Diabetes affects 18 million individuals in the United States and about 171 million individuals worldwide, and has reached epidemic status.^[4]

The onset of symptoms is rapid in type 1 diabetes; and includes the classic triad of polyphagia, polydipsia, and polyuria; as well as weight loss, irritability, drowsiness, and fatigue. Symptoms of type 2 diabetes develop more slowly and frequently without the classic triad; rather, these patients may be obese and may have pruritus, peripheral neuropathy, and blurred vision. Opportunistic infections, including oral and vaginal candidiasis, can be present. Adults with long-standing diabetes, especially those with poorly controlled hyperglycemia, may develop microvascular and macrovascular conditions that can produce irreversible damage to the eyes (retinopathy and cataracts), kidneys (nephropathy), nervous system (neuropathy and paresthesias), and heart (accelerated atherosclerosis), as well as recurrent infections and impaired wound healing. The most

common oral health problems associated with diabetes are tooth decay (caries), periodontal (gum) disease, salivary gland dysfunction, fungal infections, lichen planus and lichenoid reactions (inflammatory skin disease), infection and delayed healing, and taste impairment. Other pathology associated with diabetes includes oral infections other than those responsible for dental caries and periodontal destruction. Case reports on life-threatening deep neck infection from a periodontal abscess^[5] and fatal palatal ulcers^[6] exemplify theseverity of these conditions. There are also indications that patients with elevated salivary glucose levels carry candida intraorally more often than those with lower glucose levels.^[7] More to add, a study of 40 patients with lichen planus found that 11 patients had overt or latent diabetes, compared with none of the control group, the implication being that diabetes may be related to the pathogenesis of lichen planus.^[8]

Dental professionals must be aware of the various methods of treating effectively the oral complications of DM. Many treatments are no different from those recommended for patients without diabetes. However, managing patients with diabetes does require more effective follow-up, more aggressive interventional therapy rather than observation, regular communication with physicians/endocrinologists, and greater attention to prevention.

References

1. Pendyala G, Thomas B, Joshi SR. Evaluation of total antioxidant capacity of saliva in type 2 diabetic patients with and without periodontal disease: A case-control study. *N Am J Med Sci* 2013;5:51-7.
2. Ewing GW, Parvez SH. The multi-systemic nature of diabetes mellitus: Genotype or phenotype? *N Am J Med Sci* 2010;2:444-56.
3. Magon N, Chauhan M. Pregnancy in type 1 diabetes mellitus: How special are special issues? *N Am J Med Sci* 2012;4:250-6.
4. Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence

Access this article online

Quick Response Code:



Website:
www.najms.org

- of diabetes: Estimates for the year 2000 and projections for 2030. *Diabetes Care* 2004;27:1047-53.
5. Harrison GA, Schultz TA, Schaberg SJ. Deep neck infection complicated by diabetes mellitus. Report of a case. *Oral Surg Oral Med Oral Pathol* 1983;55:133-7.
 6. Van der Westhuijzen AJ, Grotelpass FW, Wyma G, Padayachee A. A rapidly fatal palatal ulcer: Rhinocerebral mucormycosis. *Oral Surg Oral Med Oral Pathol* 1989;68:32-6.
 7. Darwazeh AM, MacFarlane TW, McCuish A, Lamey PJ. Mixed salivary glucose levels and candidal carriage in patients with diabetes mellitus. *J Oral Pathol Med* 1991;20:280-3.
 8. Lundström IM. Incidence of diabetes mellitus in patients with oral lichen planus. *Int J Oral Surg* 1983;12:147-52.

How to cite this article: Singh P. Diabetes weds oral infection: An unhappy marriage. *North Am J Med Sci* 2013;5:337-8.

Source of Support: Nil. **Conflict of Interest:** None declared.

Announcement

Android App



Download
Android
application

FREE

A free application to browse and search the journal's content is now available for Android based mobiles and devices. The application provides "Table of Contents" of the latest issues, which are stored on the device for future offline browsing. Internet connection is required to access the back issues and search facility. The application is compatible with all the versions of Android. The application can be downloaded from <https://market.android.com/details?id=comm.app.medknow>. For suggestions and comments do write back to us.

New features on the journal's website

Optimized content for mobile and hand-held devices

HTML pages have been optimized of mobile and other hand-held devices (such as iPad, Kindle, iPod) for faster browsing speed.

Click on [**Mobile Full text**] from Table of Contents page.

This is simple HTML version for faster download on mobiles (if viewed on desktop, it will be automatically redirected to full HTML version)

E-Pub for hand-held devices

EPUB is an open e-book standard recommended by The International Digital Publishing Forum which is designed for reflowable content i.e. the text display can be optimized for a particular display device.

Click on [**EPub**] from Table of Contents page.

There are various e-Pub readers such as for Windows: Digital Editions, OS X: Calibre/Bookworm, iPhone/iPod Touch/iPad: Stanza, and Linux: Calibre/Bookworm.

E-Book for desktop

One can also see the entire issue as printed here in a 'flip book' version on desktops.

Links are available from Current Issue as well as Archives pages.

Click on  View as eBook