



Clinical Digest

ONLINE EDITION

DIABETES

Does Periodontal Health Improve Glycemic Control?

A recent systemic review and meta-analysis suggests that periodontal treatment improves glycemic control and can reduce glycosylated hemoglobin (A_{1C}) levels in patients with type 2 diabetes. Periodontitis—a chronic, multifactorial infectious disease of the supporting tissues of the teeth—is two to three times more likely to occur in patients with diabetes than in the general population.

Researchers from University of Amsterdam, VU University, and Slotervaart Hospital, all in Amsterdam, the Netherlands, identified five intervention studies of patients with type 2 diabetes in whom glycemic control improved after periodontal therapy, compared with a control group who did not receive periodontal intervention. The researchers' analysis included data on 371 patients—191 in the intervention group and 180 in the control group—with periodontitis as the predictor and the actual absolute change in A_{1C} level as the outcome. In the intervention group, patient mean age ranged from 56 to 62 years and baseline A_{1C} levels ranged from 7.2% to 9.9%. In the control group, patient mean age ranged from 53 to 67 years and baseline A_{1C} levels ranged from 6.9% to 10.2%. The patient follow-up period for both groups ranged from three to nine months.

Although only two of the five included studies showed improvement in metabolic control after periodontal treatment (as reflected by significant decreases in A_{1C} levels), the

results of all studies combined in the meta-analysis indicated an absolute decrease of 0.40% in A_{1C} levels among patients receiving treatment versus controls ($P = .03$).

Although the researchers found that improved glucose metabolism was not reflected in fasting plasma glucose (FPG) levels, they note that FPG levels reflect metabolic control at one time point in a day, whereas A_{1C} levels reflect glucose metabolism over the preceding one to three months.

The researchers view the decrease in A_{1C} levels as clinically relevant, as any such decrease may result in fewer diabetic complications. However, they call for additional controlled trials to obtain further evidence regarding these results.

Source: *Diabetes Care*. 2010;33(2):421–427.
doi:10.2337/dc09-1378.

GERIATRICS

Hip Fractures Differ For Men and Women

Hip fractures among older adults are considered the most serious of osteoporotic fractures because of their high morbidity and mortality, expense, and negative impact on quality of life. Although the risk of hip fracture increases exponentially after age 50 years, researchers from Parkwood Hospital, London, Ontario, Canada now say that the type of hip fracture differs based on patient gender and age, suggesting differences in etiology and approaches to prevention.

The researchers analyzed hospital discharge data on 2,150 patients (1,595 women and 555 men), aged 50

years and older, who were treated for hip fracture at two acute care hospitals over five years (2002 through 2006). Results showed that for all patients, age and fracture type—subcapital or intertrochanteric—were significantly related.

In the combined group of men and women, the proportion of intertrochanteric fractures increased with age (41.5% in patients aged 50 to 64 years; 50% in patients aged 85 years and older [$P = .007$]). However, based on gender, the proportion of intertrochanteric fractures increased significantly with age in women (24% in patients aged 50 to 64 years; 52% in patients aged 85 years and older [$P < .001$]), whereas it decreased significantly with age in men (59% in patients aged 50 to 64 years; 42% in patients aged 85 years and older [$P = .025$]). The proportion of male patients with subcapital fractures was significantly higher with older age ($P = .05$).

The researchers speculate that differences in fracture type and rate of bone loss based on gender may account for the results found in the study, although they say the changing rate and pattern of falling also may be important. The higher proportion of intertrochanteric fractures “speaks to the rising prevalence of osteoporosis, at least in women,” they note. “It is likely that falling dictates the prevalence of hip fracture, while the bone strength dictates who is more likely to fracture and the nature of the fracture that occurs.” ●

Source: *BMC Geriatr*. 2010;10:12.
doi: 10.1186/1471-2318-10-12.