



Evaluation of the Oral Condition of Women Predisposed to Diabetes Mellitus

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Dear Editor-in-Chief

“Diabetes mellitus (DM) is a chronic disease with serious long-term, debilitating complications and no known cure” (1). The World Health Organization (2) estimated 177 million people had DM worldwide in 2010; and expected to reach 350 million people by 2025, with devastating social and economic consequences. In Brazil, an estimated 10.3% of the population has DM (3). There is a strong genetic component that determines the onset and progression of diabetes, but the environment in which the individual lives decisively contributes to the development of the disease. There-

fore, is it possible that daughters, without DM, born to mothers with DM have same buccal alterations reported in people with diabetes?

This transversal observational study investigated whether daughters of diabetic mothers, predisposed to diabetes, have changes in oral health compared to healthy women of the same age.

The study sample was comprised of 83 Brazilian women aged, 18 to 60 yr (mean age: 39 yr), who received dental care at Positivo University, Curitiba, Brazil (table 1).

Table 1: Subject characteristics. G1: women predisposed to Type 2 DM, G2: age-matched with healthy women

	G1 (n = 34)	G2 (n = 49)	P value
Mean age (yr)	39.91 ± 11.47	32.95 ± 11.17	0.007
DMFT index	17.4 ± 7.9	11.8 ± 7.6	0.002*
Teeth present	24 ± 7	27 ± 5	0.012*
Periodontal disease	17 (50.0%)	10 (20.4%)	0.000
Teeth with endodontic treatment	n = 68 2.02 ± 1.5	n = 43 0.87 ± 1.2	0.000*
Periapical lesions	26 (76.5%)	17 (34.7%)	0.000

* Statistically significant at $P < 0.05$

The subjects were divided into 2 groups: Group 1, (G1) 34 women (39.91 ± 11.47 yr old) whose

mothers presented with type 2 DM, and Group 2 (G2), 49 age-matched women (32.95 ± 11.17 yr

old), whose mothers did not have DM. PhD endodontists performed clinical and radiographic examinations. The kappa test used to measure intra and inter reliability. The caries experienced were evaluated according to the WHO's (4) decayed, missing, and filled teeth index (DMFT). The number of teeth present in the oral cavity and number of teeth with endodontic treatment noted. In canal-treated teeth, the presence or absence of periapical lesions also noted. Periodontal disease evaluated in the clinical and radiographic examinations. The examiners evaluated topography of the gingiva and related structures to measure probing depths, gingival recession, and attachment level; the health of the subgingival area with measures such as bleeding on probing and suppuration; to assess clinical furcation status; and to detect endodontic–periodontal lesions. The distribution patterns of the data analyzed by using the Lilliefors test. The homogeneity of variance assessed with the Levene test using XLSTAT version 2010. The level of significance was set to $P < 0.05$.

G1 had a greater DMFT index, higher periapical lesions, fewer teeth and the frequency of periodontal disease was significantly higher than G2. In absolute numbers, there were 68 and 43 endodontically treated teeth in G1 and G2, respectively, and the mean value was 2.02 (± 1.5) in G1 and 0.87 (± 1.2) in G2 ($U = 457, P = 0.000$). In both groups, the frequency of endodontic treatment was higher in the upper central and lateral incisors. This study showed that women predisposed to DM had worse buccal condition than women without DM, so, in such cases, the care provided to individuals with DM should be extended to the family, since it is assumed that the nuclear family of a diabetic person maintains the same eating and hygiene habits. It is also possible that children acquire diabetogenic diet and lifestyle habits prefe-

rentially from their mothers and that maternal influence exerted entirely through modification of the postnatal environment (5). A limitation of the present study was the women's age because some oral diseases related to the age. Further studies should pair the sample age.

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