

Association of type 2 diabetes mellitus with the reduction of mandibular residual ridge among edentulous patients using panoramic radiographs

Osama Al-Jabrah
Royal Medical Services, Jordan

The aim of this study was to evaluate the association between type 2 diabetes mellitus and the reduction of mandibular residual ridge among complete denture wearers. Seventy-two (36 men and 36 women) with a mean age 63.5 years denture wearers (40 patients with type 2 diabetes mellitus and 32 control subjects) were included in the study. Mandibular residual ridge resorption was assessed by using the mental foramen and the inferior border of the mandible, as reference points using Wical and Swoope Analysis method and measured digitally on digital panoramic radiographs. The amount of resorption was calculated and correlated with type 2 diabetes mellitus and the results were compared with control group. Differences in gender, age and years of edentulousness were investigated. Statistical analysis was performed using SPSS (V11.0). Level of significance was set at 0.05. analyses of results showed that the mean amount of resorption of all participants is 8.0 mm (26.9%), diabetic group significantly ($P<0.01$) had two times more resorption compared with control group (35.8% versus 18.0%). Females recorded greater amount of resorption in diabetics 49.7% versus 21.8% ($P<0.001$) and in controls 22.3% versus 13.7%, ($P<0.05$) compared to males, respectively. The amount of mandibular residual ridge resorption was directly related to the number of years of edentulousness. It was concluded that denture-wearing diabetics, women in particular, are at more risk to have ridge resorption than “nondiabetic” normal subjects. Reduced mandibular height is directly related to years of edentulousness and denture wearing with greater amount of resorption among diabetics.

Biography

Osama Al-Jabrah has completed his BDS from University of Jordan (1994) and MSc from University of Bristol, UK (2003). He has Speciality Membership Certificate JDA (2005), JBPD, Jordan Board in Prosthetic Dentistry, Jordan Medical Council (2006). Nominated for FICD (2013). He is now working as a Senior Specialist in Prosthetic Dentistry, Division of Prosthetic dentistry, Department of Dentistry, King Hussein Medical center, Royal Medical Services, Amman, Jordan.

He has published more than 10 papers in reputed journals such as: Clinical Oral Investigation (2006), European Journal of Esthetic Dentistry (2009), Journal of Prosthodontics (2010), European Journal of Restorative Dentistry and Prosthodontics (2004), Open journal of Stomatology (2011), and other local and regional dental and medical journals.

osamajabrah@hotmail.com