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Diabetic Osteopathy: Who is at Risk?

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**Abstract:** This study was designed to determine the prevalence of osteopathy in diabetic patients, who are at risk of developing osteopathy, and clarify the relationship between osteopathy and other complications of diabetes mellitus. Thirty-four type I and 66 type II diabetic patients admitted to the endocrinology clinic between 1996 and 1997 and 30 nondiabetic subjects as a control group were studied. Bone scintigraphy (Tc 99m methylene diphosphonate) was used for the diagnosis of osteopathy. The body mass index (BMI) of each patient was calculated. Polyneuropathy was assessed by electromyography and the patients, for each of whom BMI was calculated, were asked about the symptoms of autonomic neuropathy and history of foot ulcer, whereas cardiovascular autonomic neuropathy was assessed by autonomic neuropathy tests and calculated QTc (corrected QT). Fundoscopy was performed for evaluation of retinopathy. Biochemical analysis was carried out for blood glucose, HbA1c levels and microalbuminuria, an indicator of nephropathy. We found that the prevalence of osteopathy is 44% in diabetic patients and the risk of osteopathy increases with the duration of diabetes ( $p<0.05$ ) and the age of the patient ( $p<0.05$ ). The risk was found to be higher in females ( $p<0.05$ ), and no relationship between the body mass index of the patient and blood glucose regulation was observed. 76.9% of patients with history of foot ulcer ( $p<0.01$ ), 61% of patients with retinopathy ( $p<0.01$ ) and 68.8% of patients with autonomic neuropathy ( $p<0.01$ ) were found to have osteopathy. Because osteopathy may have devastating end results which can be prevented if recognized early, we suggest that all diabetics, especially those in the risk group, must be screened for osteopathy and, if required, they must receive proper treatment.

**Key Words:** Diabetes Mellitus, Osteopathy, Bone scintigraphy

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