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SMOKING IS ASSOCIATED WITH INCREASED RISK OF OSTEOPOROSIS IN DIABETES MELLITUS PATIENTS

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Background: Diabetes mellitus, in particular type 2 diabetes mellitus (T2DM), is a common metabolic disease with increasing prevalence throughout the world. Musculoskeletal (MSK) complications of diabetes mellitus (DM) are the most common endocrine arthropathies. Osteoporosis is considered a global public health problem currently affecting over 200 million people. Osteoporosis is the most common systemic skeleton illness that is characterized by reduction of bone mass and disruption of bone architecture, resulting in an increased risk of fragility fractures which represent the main clinical consequence of the disease. Smoking is associated with multiple complications of diabetes; the risk of complications associated with tobacco use and diabetes in combination has been stated to be approximately 14 times higher than the risk of either smoking or diabetes alone.

Objective: To assess the association of smoking with osteoporosis in diabetes mellitus patients.

Patients & Methods: A cross sectional study was conducted on 150 patients with diabetes mellitus mainly type 2. All patients were seen in the Department of Rheumatology in Hilla Teaching Hospital. The patient's data were obtained via face-to-face interview performed by a rheumatologist. DM related data, such

as duration, smoking history, drug use (oral hypoglycemic drugs, insulin), body mass index (BMI) of the patients was sent for DEXA (Dual energy X-ray absorptiometry) to confirm diagnosis of osteoporosis, after the exclusion of other causes of osteoporosis by exclusion criteria which was done by many hormonal and other laboratory investigations.

Results: Among 150 patients with DM, 60.70% were females and 39.30% were males, as females were predominant in the study. There is an association between osteoporosis and age of <50 years ($p<0.004$), as most patients were female at premenopausal age. There is significant association between smoking and osteoporosis in DM patients ($p<0.002$). Also, BMI shows no significant association with osteoporosis in DM patients as most patients were obese or overweight with increased bone mineral density.

Conclusion: It could be concluded that there is significant association between smoking and osteoporosis in DM patients and that smoking increases the risk of osteoporosis in DM patients.

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