
# Early diagnosis of osteoporosis in patients with systemic scleroderma

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ABSTRACT

Systemic sclerosis is a chronic autoimmune inflammatory disease of connective tissue with multi-syndrome clinical presentation.Disease-related factors,age,hormone therapy may be associated with increased bone loss. Skeletal damage is considered to be one of significant contributors to the quality of life of these patients. The prognosis of the disease is determined by the nature and severity lesions the thoracic organs ,especially the branches and the heart. The goal of this study was to determine the prevalence of osteoporosis and associated fractures in people with systemic sclerosis. 58of publication and 18 patients were selected for which the study of mineral bones with systematic sclerosis and in the control group of healthy people in comparison groups that included other rheumatic disease. Studies were conducted in relatively small groups of patients;the results presented vary over a wide range.Further studies are required to clarify the mechanisms of osteoporosis development and its treatment and prevention in patients with systemic sclerodermia.

**Keywords:** Systemic sclerosis, osteoporosis, bone mineralization, bone fracture

## Introduction

Systemic sclerosis , a rare rheumatic disease, is characterized by widespread skin fibrosis, vasculopathy, and internal organs disorders. While the pathophysiology of the disease limited evidences on the treatment for some complications progressive, resulting in death, disability, and decreased quality of life. It is well known that the extent of skin and arthralgia ,osteolysis and contractures.

## Frequency Of Osteoporosis In Patients With Systematic Sclerodermia

Already the first studies conducted in the last years showed the patients with ssc have a significant decrease in bone mineral density and the incidence of osteoporosis is higher compared to healthy controls. Only a few studies did not reveal differences in bone mineral density(BMD)between patients with SSDand healthy people . It is well known that the incidence of osteoporosis fractures is significantly increased in patients with systematic connective tissue diseases such as rheumatoid arthritis and systematic lupus erythematosus.

## Risk Factors For Osteoporosis And Fractures In Systemic Sclerodermia

Risk factors are divided into modifiable and non-modifiable . In most studies in patients with SSDan associated of reduced BMD with traditional risk factors for disease was found .According to a systematic review, these

include heredity , age,menopause ,low vitamin d levels. In addition SSD specific factors were noted :diffuse form of SSD, damage to internal organsand calsification .

**Age**

Its note worthy that BMD in certain parts of the skeleton in women with SSD, both in postmenopouse and in the reproductive period life is less than in healthy women. Menopouse is considered to be the next most frequent risk factor. The proportion of postmenopausal women among patients is higher than in the age-matched control group of women.

**Index Of Bone Mass**

BMI the threshold value of which is 21kg/m2. The association of osreoporosis with decrease in BMI was founded in a number of studies with (2,4)

**Materials And Methods**

Cases were categorized as SSD(limited cutaneous SSD) . We avoided the understanding who were analyzed with cover with other connective tissue diseases, cancer experiencing chemotherapy, unremitting kidney ilness, and hypothyroidism, who were pregnant or breast nourishing , and who had been assessed for bone mineral thickness or atomic pharmaceutical inside 3 months.

Main on a previous appraise of the predominance of osteoporosis in SSD(17.8%)10 with a testing variability of 4%, it was estimated that a test size of at least 78 was needed for statistical ampleness to appraise the true prevalence of osteoporosis. After the maintenance period and a preliminary analysis, we found the prevalence of osteoporosis was 21 of 66 cases (31.3%) . We thus recalculated the test size and collected 66 instead of 78cases in order to achieve better patient care and reduce the cost of the study. Demographic and clinical signs including age, sex, menopausal situation, duration of disease, SSD subset, and history of osteoporosis and fracture were collected. BMD at the lumber spine (LS) and femoral head (FH) were measured using dual energy X-ray absorptiometry (DXA) The 25-hydroxy vitamin D [25(OH)D] level using direct competitive chemiluminescence immunoassay, thyroid and thyroid stimulating hormones, parathyroid hormone, calcium and phosphorus levels, and inflammatory markers [erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP)] were measured. Gastrointestinal involvement of SSc included any gastrointestinal symptoms (i.e., malabsorption, constipation, ileus, or pseudo-intestinal obstruction). Vitamin D insufficiency and deficiency was defined if 25(OH)D levels were < 30 and < 20 ng/ml, respectively.

**Results**

Demographic information are categorized and summarized using descriptive statistics. Categorical data were presented as proportions or percentages. Continuous data were presented as means with standard deviations (SD) or medians with interquartile ranges (IQR) as appropriate. The overall prevalence of osteoporosis, the prevalence of osteoporosis at the LS and FN with their 89% confidence interval (CI) were calculated

**Conclusion**

The studies carried out to date demonstrate the high prevalence of this disease abd its complication .The statistic significantly higher than its prevalence in the population in allage groups. These information illustrate that along with traditional risk factors, the mechanism directly related to the disease plays an important role in the development of osteoporosis. The inconsistency of the results of the work may be due to the fact that the studies were conducted with the inclusion of relatively small groups of patients and the clinical heterogeneity of the itself. Undoubtedly ,further research is needed to determine the tactics for the prevention and treatment.

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