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Clinical and Epidemioligical Features of Complex Diseases in Self Treatment

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Abstract: Diseases of osteoporosis and the assessment of the patient is taken from the degree of fracture as a marker of many diseases. But bone mineral density (SMZ) is also associated with disease and the risk of fracture. Metabolic disorders associated with secondary osteoporosis are 2-3 times higher in women and in men with hip fractures and vertebral fractures. Globally, osteoporosis is the most common metabolic, bone disease, affecting more than 200 million people worldwide. In Europe, the United States and Japan, 75 million people are diagnosed with osteoporosis. As SMZ decreases, osteoporosis increases with age. Senile osteoporosis is more common in people over 70 years of age. Secondary osteoporosis can occur in any person. Although bone loss in women begins gradually, it accelerates menopause, with delivery at age 50 and beyond. The incidence of postmenopausal osteoporosis is highest in 50-70 women. Women are higher on osteoporosis. Half of postmenopausal women have fractures associated with life and osteoporosis; Ush develops a spinal deformity in 25% of women, and 15% experience hip fractures. Hip fractures are similar in different ethnicities.

Keywords: Osteoporosis, systemic scleroderma, vasculopathy, cellular, humoral autoimmune, densitometry, injuries, hormonal, diabetes mellitus.

I. Introduction

Systemic scleroderma (TSD) is a disease of unknown connective tissue of unknown etiology, clinically heterogeneous and chronically progressive. It is based on three pathological processes: vasculopathy, cellular and humoral autoimmune conditions, and progressive visceral and vascular fibrosis in many organs. In the United States, the disease causes 9 to 19 cases per 1 million people each year. [2,33]

According to the National Osteoporosis Foundation (MOF), in 2010, more than 10 million adults over the age of 50 in the U.S. had osteoporosis, and more than 43 million had low bone mineral density. In 2015, there were 2.3 million osteoporotic fractures from nearly 2 million Medicare in the United States. Within 12 months of experiencing a new osteoporotic fracture, approximately 15 percent of patients experienced one or more subsequent fractures, and nearly 20 percent died. Mortality was highest in patients with hip fractures, with 30 percent dying within 12 months.

II. Literature review

Many studies evaluating the prevalence and morbidity of osteoporosis use the degree of fracture as a marker of disease. But bone mineral density (SMZ) is also associated with risk of disease and fracture.

Our study included patients with clearly defined TSD disease, and this allowed a detailed analysis of the most important factors of bone mineral density.

In the majority of selected patients, the gastrointestinal tract is damaged, as well as skin lesions come first. no organ damage was observed in selected patients. This condition is important to us in excluding the effect of other damaged organs on the decrease in bone mineral density.

III. Analysis

Our gastrointestinal tract and skin lining are of particular importance when we take Vitamin D externally. Therefore, TSD is an injury to these areas that develops from the early stages of the disease.

However, not all patients had gastrointestinal damage, and this allowed us to understand the effect of this system on the reduction of vitamin D levels in the body.

So far, studies have shown that glucocorticosteroids, which are widely used as anti-inflammatory agents in autoimmune diseases, have been cited as the main cause of decreased bone mineral density. But we know that the mineral density of bone depends not only on calcium metabolism but also on the metabolism of Vitamin D, which ensures its absorption.

The main symptom of TSD is skin damage, as well as damage to the mucous membrane of the gastrointestinal tract.

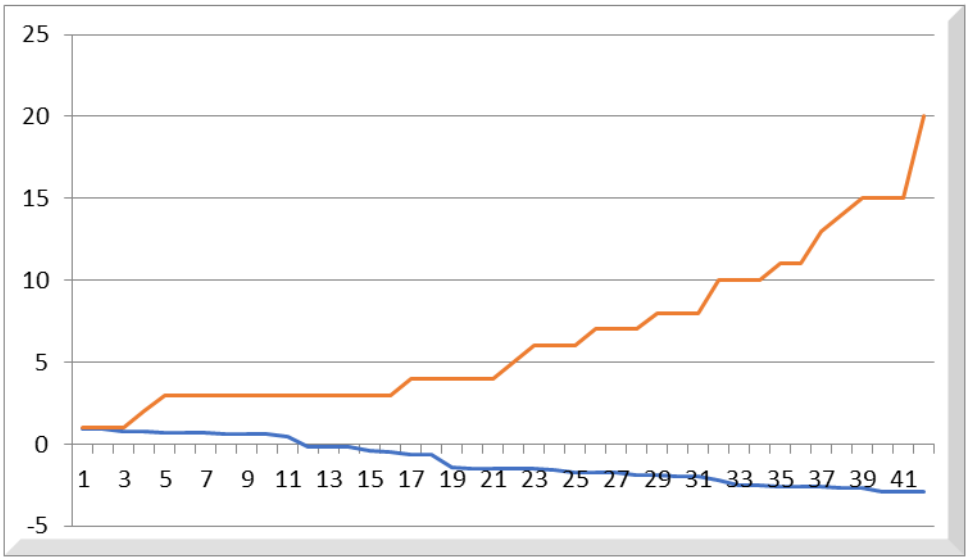
In order to find out to what extent these cases affect Vitamin D metabolism, we assessed the amount of vitamin D in the blood of selected patients and also evaluated the bone mineral density of these patients.

According to the results, 18 (43%) patients had normal bone mineral density, 14 (33%) had reduced bone mineral density, ie osteopenia, and 10 (24%) patients had osteoporosis. .

Hence, the amount of 25 (OH) Vitamin D in the blood of TSD patients was distributed in 3 different levels i.e. deficiency, deficiency and insufficiency. Analyzing the results obtained accordingly, we see that the amount of Vitamin D 25 (OH) is below the norm in 57% of patients. However, if we consider these indicators separately, the amount of 25 (OH) Vitamin D in the blood was detected in 21% of patients.

However, the timing of TSD diagnosis in our selected patients was different, so it was necessary to determine the duration of the disease as well. The average duration was 6.5 years. However, 52% of patients developed the disease in less than 5 years.

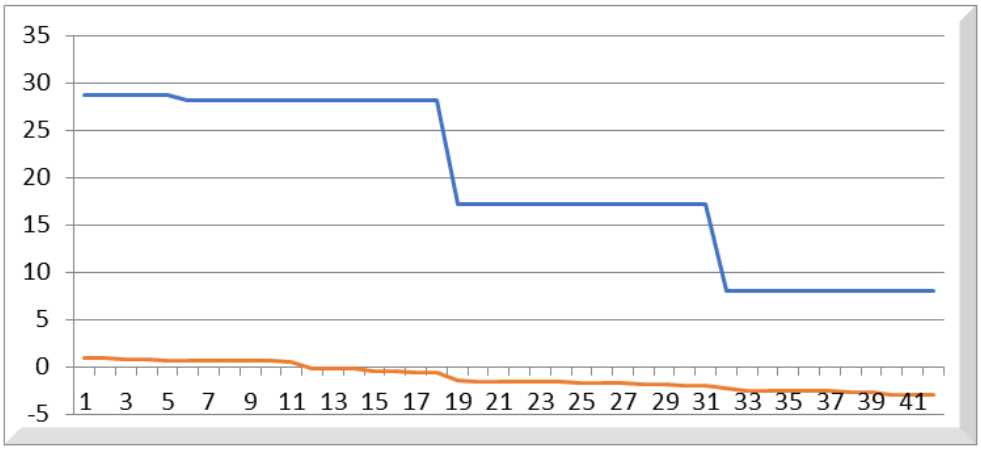
In this case, we can see that the amount of Vitamin D in the blood depends on the duration of the disease. (Figure 4.1) More specifically, a change in the amount of 25 (OH) Vitamin D in patients was found to have an inverse correlation with disease duration. r = -0.88 (strong feedback)



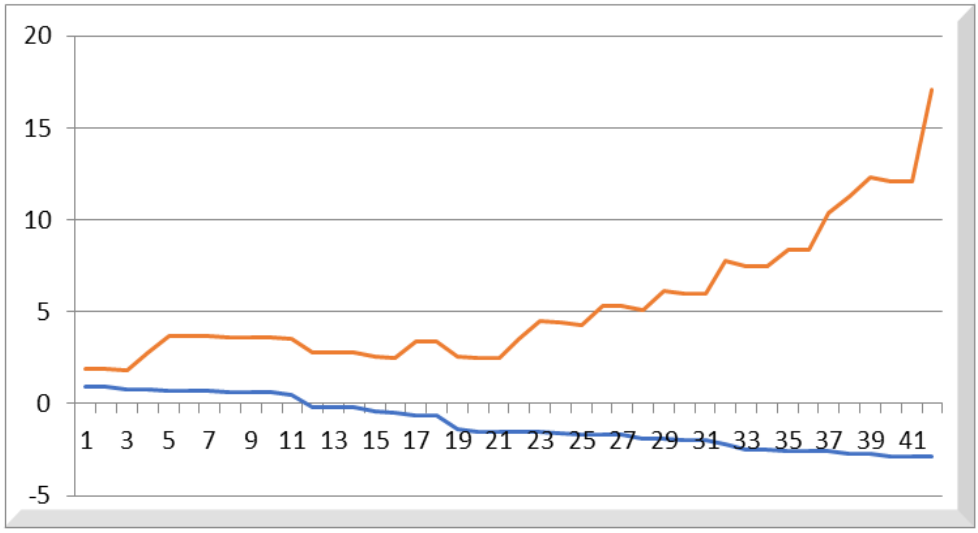
Ultrasound densitometry analysis was performed in selected patients. The results were as follows: The average T-score was -1.09. This is generally true of osteopenia. However, to be more precise,

bone mineral density was normal in 43% of patients and decreased bone mineral density in 57% of patients. (Figure 4.2)

This suggests that we can see that there is a correlation between the T-score obtained as a result of the ultrasound densitometer analysis of the number of patients whose blood levels of 25 (OH) Vitamin D are lower than normal. r = 0.9 (strong direct connection)



It also showed a strong inverse (r = -0.8) correlation between the decrease in bone mineral density and the duration of the disease.

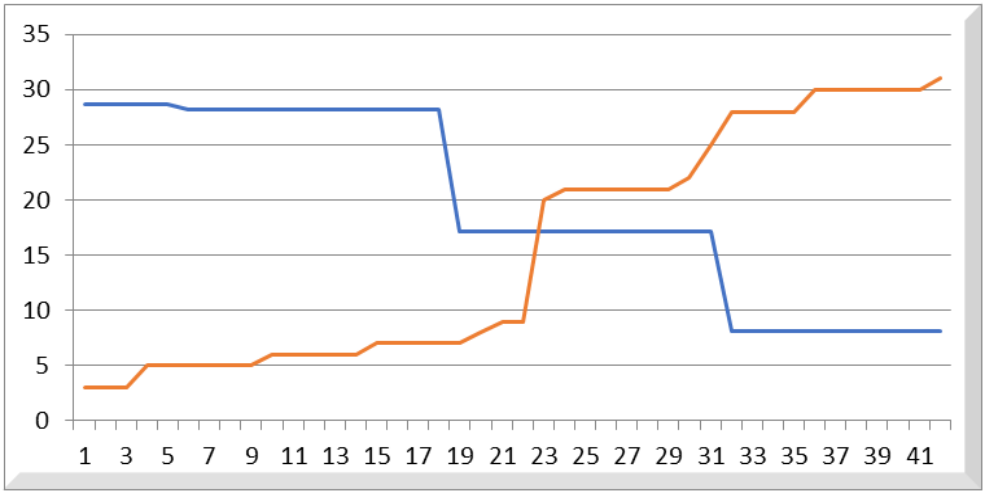


According to the ultrasound densitometer analysis performed in the patients, the level of bone mineral density in 24% of the patients was assessed as a state of osteoporosis.

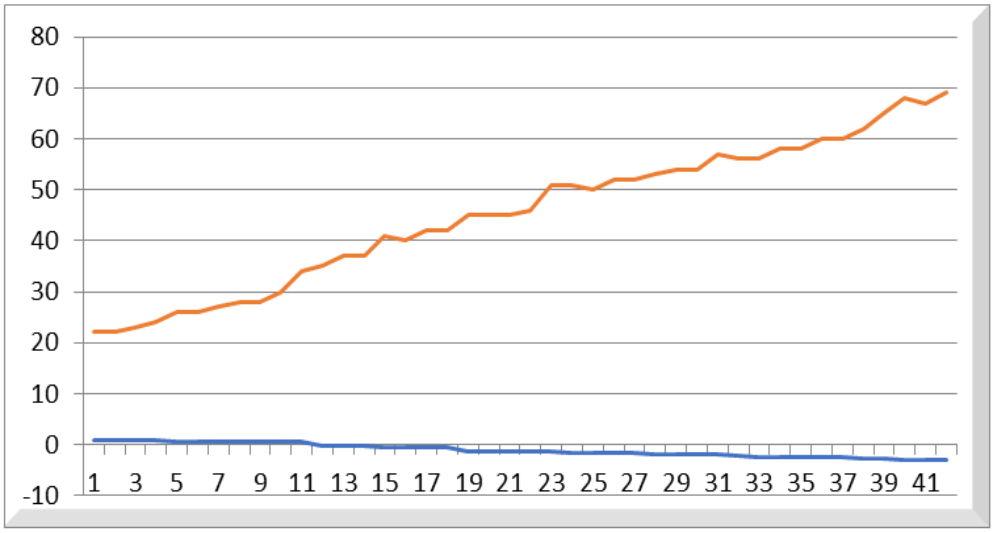
When assessing the degree of skin damage in patients selected using the mRSS scale, the average result was 15.4. However, in 48% of patients, the mRSS result is higher than 20, which means that the rate of skin injury is high (Figure 4.4).

IV. Discussion

Given the specific role of skin in vitamin D metabolism, there should have been a correlation between the amount of 25 (OH) Vitamin D in the blood of patients. The result was: r = -0.69 (inverse mean correlation)



Given that bone growth begins to lag behind its resorption after the age of 30-35 years, it is also important to note the age-related change in our patients (Figure 4.5). Among the selected patients, the average age was 45 years. The correlation between the age of the patients and the result of the ultrasound densitometer performed on them had a weak inverse relationship. (r = -0.21)



V. Conclusion

Early detection of osteoporosis by monitoring the amount of vitamin D fractions in the blood from early stages of the disease and densitometer examination in order to assess bone mineral density and early assessment of orthoporosis in patients with TSD. Perform substitution therapy in patients diagnosed with vitamin D deficiency.

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