INFLUENCE OF DAILY PHISICAL ACTIVITY ON BONE MINERAL DENSITY IN POSTMENOPAUSAL WOMAN WITH COXARTHRIS

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INFLUENCE OF DAILY PHISICAL ACTIVITY ON BONE MINERAL DENSITY IN POSTMENOPAUSAL WOMAN WITH COXARTHRISIS

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Introduction
One of common problem in postmenopausal woman is problem with reduced Bone Mineral Density (BMD). This could be more outstanding in patient with coxarthrosis, in who special way of living, which was cause on nature disease, could produce many problems in daily activity and also leave patient physically less active.
Aim
The aim of study was to establish how daily physical activity

influence on BMD in postmenopausal woman with coxarthrtosis.

Material and methods

We examined 80 post-menopausal women (age 40-80) who were in post-menopause more than 12 months. All patients had coxarthrosis which was verified and now in grade II and III of Kellgren & Lawrence radiographic scale. Analysis of BMD was performed with „Sahara" ultrasound osteodesitometry. We used scale Body Mass Index (BMI), National Health Center Statistic Criteria and self-evaluation of health by patients.

Results

Average body mass was 73.125 kg (55.5-97.1) and body height was 1.56 cm (1.45-1.67) which was indicated that our patient was globally short female. Average BMI was 29.843 kg/m2 (23.32-37.89) which indicate that we had overweight patient (around 50% of our patient were belong in group of overweight patient). In 60% of our patient menopause started before 45 years old, and our entire patient were in post-menopause more than 12 months. Estimated BMD was 0.353g/cm2 (0.176-0.779). Average T-score was -2.25 (-3.6 till -0.2) which was indicated on osteopenia, which was also be in correlation with value of Z-score -1.485 (-2.7 till -0.1). We could find any statistically significant correlation between period of starting menopause and value of T and Z score. We found statistically significant correlation (r=0.447: p=0.0048) between BMI and estimated BMD which indicated that patient with higher value of BMI could have better BMD, which is in aggregation with fact that underweight could be risk factor for osteoporosis. Evaluating daily physical activity, according to walking more that 5 km per day, we found that 70% of our patient did not walk more than 5 km per day, which may be cause of their basic disease, and we did not find significant influence on BMD and T or Z score but in group of patient who daily practice static exercises, which was around 60% of our patients, we found statistically significant correlation between daily exercise and BMD (r=0.445, p=0.039) and T score (r=0.429; p=0.049) which indicated positive influence on BMD.

Conclusion

Daily practice of static exercises patient with coxarthrosis could positively influenced on increase BMD and bettering state of their bone which reduced many complications which is connected with basic disease.