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EVALUATION OF BONE MINERAL DENSITY LOSS IN PATIENTS WITH BREAST CANCER USING AROMATASE INHIBITORS AS ADJUVANT ENDOCRINE THERAPY: 5-YEAR FOLLOW-UP

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Objective: To verify the impact of the use of aromatase inhibitors in postmenopausal women undergoing treatment for breast cancer, to evaluate the progression to osteopenia and osteoporosis, and to assess bone loss. **Methodology:** This is a cohort, prospective study with 76 women with positive hormone receptor (RH+) breast cancer before and after the beginning of the use of aromatase inhibitors (AI). After approval of the project by the ethics committee, the mineral density of the lumbar spine (L1–L4), the neck of the femur, and the total femur were analyzed by image examination and the average standard deviation for the young adult (T-score) was calculated in all patients before and after 6 months and 5 years of the use of AI by classifying them into three groups: osteoporosis, osteopenia, and normal. The data were analyzed initially by the KS test to determine the normality of the sample and later by ANOVA considering $p \leq 0.05$. **Results:** Before the use of AI, 38 (54%) patients had a normal exam, and 32 (45%) had osteopenia and no osteoporosis. After 6 months of treatment, 34 (49%) had normal examination, 30 (43%) had osteopenia, and 6 (8%) had osteoporosis; after 5 years, 26 (37%) had normal examination, 38 (55%) had osteopenia, and 6 (8%) had osteoporosis; no patient with normal bone density developed osteoporosis. There was a significant loss of bone mass in the femur of -7.88 after 5 years (p=0.001), in the femoral neck of -5.76 after 6 months (p=0.019) and -9.41 after 5 years (p=0.000). There was no significant change in the column (p=0.054). **Conclusion:** Bone loss in postmenopausal women after 6 months and 5 years may be related to the use of aromatase inhibitors.

Keywords: Breast Neoplasms; Aromatase Inhibitors; Bone Density.