

Effect of everolimus combined with anastrozole on serum FOXP 3 and MMP 9 in hormone receptor-positive elderly breast cancer patients

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Received 18 March 2023; revised 13 December 2023

Breast cancer currently leads among all the types of cancer in the total number of estimated cases worldwide, and holds fourth position in total number of deaths caused by cancer. It calls for early diagnosis and an effective treatment. Here, we explored the effect of everolimus combined with anastrozole treatment on the prognosis and serum FOXP 3 and matrix metalloproteinase 9 (MMP 9) in hormone receptor (HR) positive elderly breast cancer patients. A total of 96 elderly patients with HR positive breast cancer admitted to the hospital from April 2018 to April 2021 were selected and divided into two groups according to the random number table method. The control group (n=48) was given anastrozole, and the study group (n=48) was given everolimus and anastrozole. Recent efficacy, estrogen, adverse effects, survival rate, and test serum FOXP 3, MMP 9 levels were recorded. The results showed higher objective response rate (ORR) as (62.5%, 30/48) (41.67%, 20/48) ($P < 0.05$), 1-year survival rate as (91.67%, 44/48) (75%, 36/48) ($P < 0.05$), and stomatitis as (25%, 12/48) (8.33%, 4/48) ($P < 0.05$). After treatment, estradiol (E2), luteinizing hormone (LH), FOXP 3, and MMP 9 were lower than before treatment ($P < 0.05$), and the study group was lower than the control group ($P < 0.05$). It has been concluded that everolimus and anastrozole therapy in HR positive elderly breast cancer can reduce estrogen and serum FOXP 3 and MMP 9 levels, with high 1-year survival rate, but with high incidence of stomatitis.

Keywords: Estradiol, Hormone receptor positive, Luteinizing hormone, Objective response rate, Stomatitis, Tumor