

Efficacy of Rapamycin Therapy in the Women with Metastatic Breast Cancer in West Iran

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Abstract

Introduction: Mammalian target of rapamycin (mTOR) is one of the serine-threonine protein kinases and plays an important regulatory role in cell growth. Several randomized trials have shown that the use of mTOR inhibitors could improve patient outcome with hormone receptor-positive or Her2 positive breast cancer. The aim of study is to evaluation of efficacy of rapamycin therapy on the OS in metastatic breast cancer (mBC) patients in West Iran for the first time.

Materials and Methods: Between of 2010 to 2014, sixty women with mBC referred to our Clinic. All of them after metastasis were treated with rapamycin (1 mg/day). Forty-three patients were treated for at least one year to three years (mean, 18 months) with rapamycin, that these patients were interred to our study.

Results: The mean age for the patients at diagnosis of BC was 42 years (\pm 9.9), 100% women. All of the patients had metastasis. For comparison of survival, we divide patients to 3 groups. Group 1: Patients with ER, PR positive and Her2 negative, Group 2: Patients with ER, PR and Her2 positive and Group 3: Patients with ER, PR and Her2 negative. The 5-year overall survival for mBC patients in group 1 was 93.3%, group 2 was 42.8% and group 3 was 72.7%.

Conclusions: Rapamycin combination to hormone therapy increases the OS in the patients with mBC, but Rapamycin combination to trastuzumab therapy reduces the OS. Efficacy of Rapamycin Therapy in the Women with Metastatic Breast Cancer in West Iran.