

Factors associated with treatment delay in women with primary breast cancer who were referred to reproductive specialists.

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Abstract

Treatment-related infertility is known as a survivorship issues among young breast cancer patients. Cancer treatment-delay due to fertility preservation procedure can be a barrier for patients who might seek fertility preservation. This study sought to describe any association between fertility preservation and treatment-delay then to assess factors related to treatment-delay. Women diagnosed with breast cancer stages I to III between 2007 and 2015 who visited reproductive unit at our institution were included. Cut-off of treatment-delay was defined as below; time to treatment (TTC) >8weeks for patients intending to receiving to neoadjuvant chemotherapy, TTC>12 weeks for patients intending to receiving to adjuvant chemotherapy patients, time to endocrine therapy (TTE) > 12 weeks for patients intending to receiving endocrine therapy without radiation therapy, and TTE > 20 weeks for patients intending to receiving endocrine therapy after radiation therapy. Multivariable models were constructed to examine factors associated with treatment-delay. Two-hundred twenty-two patients met the inclusion criteria. Mean TTC among patients who received neoadjuvant chemotherapy or adjuvant chemotherapy was 30.7 days (SD = 29.3) and 65.6 days (SD = 29.5) respectively. Mean TTE without radiation therapy or with radiation was 74.0 days (SD = 51.7) and 124.0 days (SD = 67.5) respectively. Among patients receiving adjuvant chemotherapy, TTC of fertility preservation group was longer than no fertility preservation group (66.3 vs 64.9 days, $p = 0.03$); the treatment-delay rate was not statistically different between the two

groups. Treatment-delay occurred in 18% of patients. Endocrine therapy was a related factor to treatment-delay (OR, 4.45; 95%CI: [1.01-19.57]; $p = 0.048$), but fertility preservation was not (OR, 1.82 95%CI: [0.88-3.76], $p = 0.10$). Early referral to reproductive specialist is required especially for patients intending to receive endocrine therapy.

Key words: breast cancer, fertility, fertility preservation, treatment-delay