Treatment Outcomes for Early Stage Male Breast Cancer: A Single Centre Retrospective Case-Control Study

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Background: Male breast cancer (BC) is a rare disease with limited information available on treatment outcomes compared to their female counterparts. The objective of this study was to compare the disease free survival (DFS) and overall survival (OS) of males with early stage BC compared to females and to attempt to elucidate other factors affecting outcomes.

Methods: A retrospective case-control study was conducted comparing males and females treated for stage 0 to IIIIB BC at a single institution between 1981 and 2009. Matching was based on: age at diagnosis (+/- 2 years), year of diagnosis (+/- 1 year), and disease stage. Data was collected regarding surgery, radiation, chemotherapy, and endocrine therapy. OS and DFS were calculated using Kaplan-Meir analysis.

Results: A total of 144 patients (72 female; 72 male) were eligible. Median age at diagnosis: 66.5 years for both sexes. Median follow-up: 45 months for males 55 months for females. Treatments included: mastectomy (72 males; 38 females), radiation (44 females; 29 males), chemotherapy (20 females; 23 males), and endocrine therapy (79 % both genders). Mean DFS for females 127 months (range 4-241), compared to 93 months (range 2-204) for males (p=0.62). Mean OS for females: 117 months (range 4-241), and 124 months (2-204) for males (p=0.36). In multivariate analysis, the only parameter that affected both DFS and OS was stage at diagnosis (HR 0.42, 95% CI 0.18-1.00; HR 0.25, 95% CI 0.09-0.68). Patients who received chemotherapy had improved OS (HR 2.531, 95% CI 1.05 - 5.85, p=0.04).

Conclusions: This is one of the largest case-control studies to report on treatment outcomes of early stage male BC patients treated in a non-trial setting. Male patients received comparable systemic therapy as their female counterparts and had similar OS and DFS. These results add to current evidence from population studies that male sex is not a poor prognostic factor in early stage breast cancer.