



Prognostic factors for breast cancer in younger women

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Introduction:

Current evidence suggests that in women aged less than 35 years, breast cancer is unquestionably the leading cause of cancer-related deaths. The aim of this study was to identify factors affecting overall survival rates in younger women treated for breast cancer.

Methods: We retrospectively reviewed files of all women aged 35 or less, diagnosed and treated for breast cancer in obstetric and gynecologic department in Ben Arous Hospital over a period of 10 years between 2010 and 2020. We analyzed collected data to establish factors affecting overall survival.

Results:

65 patients among 301 treated for breast cancer in the same period were aged 35 or less (21.6 %). In our study, 17% of cases were diagnosis with advanced breast cancer (LABC). High histological grade, vascular emboli and lymph node positivity were observed in respectively 88.6%, 20.5 % and 34% of cases. Furthermore, triple negative forms were observed in 3 patients and Her2/neu overexpression in 4.25% of cases. We reported 6 deaths, (12.7%) all occurring during the first five years. As for prognosis factors, overall survival rates were significantly better for ductal carcinoma in situ and lobular carcinoma. The presence of an intracanal component associated with an invasive ductal carcinoma, lymph node invasion, and vascular emboli seemed to be associated with poor prognosis. The presence of immediate metastasis or metastatic relapse was associated with higher mortality rates in young women.

Discussion:

Prognostic factors are important in the treatment of cancer to help identify subgroups of patients who may need different, earlier or more intensive treatment. In this study, the overall 10-year survival was 83%. This rate was comparable to Tunisian studies since it varied between 53.5% and 86.84% in young women(1,2). Young age is a main prognostic factor (3). Young women have different tumor characteristics with more high histoprognostic grade tumors, more lymphatic emboli, less overexpression of hormone receptors, and more overexpression of c-erbB2, a higher local relapse rate and overall survival is less good for patients under 35 (3,4). Clinical tumor size is closely correlated with the risk of axillary lymph node invasion as well as the risk of distant metastasis and cancer-related death (5). On the other hand, this correlation is not found for triple-negative tumors and tumors occurring in patients carrying constitutional BRCA1 mutations. The relationship is also less clear for tumors overexpressing HER2 (5). In our series, the tumor size was greater than 2 cm in 26 patients. We have not objectified a correlation between tumor size and overall survival (p=0.541), probably because of the small size of our sample. However, histological type is an important prognostic factor for breast cancer, regardless of age.

The difference in prognosis between invasive and non-invasive histological forms is clear. In young women, invasive carcinoma, and particularly infiltrating ductal carcinoma, is the most common, which makes the prognosis poor in this age group. For ductal carcinoma in situ, the high nuclear grade and the presence of necrosis are associated with a higher risk of local recurrence after conservative treatment, recurrence which is in the form of invasive cancer in 40 to 50% cases (1,4). The most important prognostic factor for breast cancer in young women is lymph node involvement (1,2,5). According to several authors, relapse-free survival, metastasis-free survival and overall survival are inversely proportional to the number of lymph nodes affected (4,5). Most authors accept a threshold beyond 3 N+ allowing the classification of patients with a poor prognosis (1,3,5). In our study, survival was significantly related to lymph node stage (p<0.0001). Several authors have noted the presence of forms with a high histoprognostic grade in young women (1,2,3). In our series, high SBR III and II grades were frequently found with a respective rate of 61.3% and 27.3%. Survival was better for SBR grades 1 compared to grades II and III . Younger women were found to have a higher likelihood of lymphatic vascular invasion. For stage I, relapse-free survival at 20 years is 62% if there are emboli versus 78% in the absence of these (1,4,5). In our study, the presence of lymphatic emboli negatively influenced overall survival in young women with a statistically significant difference (p=0.018). These results suggest that young women have more aggressive disease than older women.

Conclusions:

There is clear evidence that breast cancer in young women is more aggressive and has potentially unique and complex biological and clinical features. It requires special attention due to its specific morphologic and prognostic characteristics and therapeutic aspects, including fertility preservation and psychosocial issues.

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