FACTORS ASSOCIATED WITH LATE-STAGE DIAGNOSIS OF BREAST CANCER AMONG EGYPTIAN WOMEN

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Background

Tumor stage of breast cancer (BC) crucially determines its prognosis. Detecting BC at earlier stages (stage I & II) comes with better prognosis, better response to treatment, and thereby higher survival rates, while diagnosis at late-stages (stage III & IV) has poor outcomes and responsible for the escalating mortality rates from the disease. Late-stage diagnosis of BC is a common problem in limited resources setting. The aim of the study was to understand the underlying factors associated with the late-stage diagnosis of BC in Egypt.

Methodology

A cross-sectional study design was conducted in one of the main tertiary cancer hospitals in Egypt. A sample of 400 women with pathologically confirmed BC who were newly diagnosed within one year were enrolled in the study. Data was collected from medical records and interviewing questionnaire with the study participants. The collected data included: clinical characteristics of the tumor, socio-demographic characteristics of the studied women, their knowledge about the disease, screening behavior, and time from symptom onset to definite diagnosis as suspected predictors to the stage of BC at diagnosis. Data was analyzed by crude odds ratios (95% confidence interval) and binary logistic regression analysis.

Results

The study revealed that 47.5% were diagnosed at late stages (40% at stage III/7.5% at stage IV), while (52.5%) were diagnosed at early stages (6.5% at stage I/46% at stage II). Logistic regression analysis showed that unmarried females, having non-luminal molecular subtype of BC, presentation with non-palpable lump or non-breast symptoms, and diagnosis delay longer than 3 months were the statistically significant risk factors of late-stage diagnosis of BC. The risk of late-stage diagnosis among women with non-luminal subtypes (HER2 enriched and triple negative tumors) was 3.917 times relative to women with luminal subtypes of BC (p<0.001). In addition, the risk of late-stage diagnosis among women who delayed more than 3 months was 11.637 times relative to women who were diagnosed within 3 months (p<0.001).

Conclusion

Tailored policies should address the delay in diagnosis and adaptive early detection strategies of BC should be promoted in Egypt and similar developing countries.

Disclosure

All authors have declared no conflicts of interest.

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Figure 1: Distribution of the studied cases with BC by tumor stage at initial diagnosis (Alexandria, 2018)

Table 1: Logistic regression analysis for factors associated with late-stage diagnosis among BC cases (Alexandria, 2018)