Background and Objectives

It is well known that presence of ER, PR or HER2/neu is associated with better response to hormonal Tx & Herceptin. Looking from a different angle, we thought to detect predictors of PR and HER2/neu positivity prior to biopsy in advanced breast cancer (BC).

METHODS

A retrospective cohort study of BC patients referred to NCI, Cairo University (2012-2014). Detailed clinicopathological and surgical data were obtained. Chi-square test, Fisher’s exact tests and logistic regression model were used. Factors with P value < 0.20 in univariate analysis were involved in multivariate analysis (MVA).

RESULTS

Enrolled BC cases were 153 with median age 53 years (27-86). Thirty six (23.5%) cases were T3N1M0.

Ninety-six (62.7%) cases were ER+ve. More than half of our cases (52.9%) were PR+ve. Her2/neu was detected in 31 (20.3%) cases.

We found a statistically significant difference between young (<45 years) and old age group in lymph node (N) metastasis with higher stages tend to be more prevalent in the later group (p = 0.03). Higher ER positivity was more observed in older patients (p = 0.015).

69 cases with full clinical data were selected for subgroup analysis to evaluate the predictors of positive PR and predictors of positive HER2/neu prior to breast biopsy. Median number of offspring was 3. For clinical data, see table.

Fourty-six (66.7%) cases were ER +ve. Thirty-four (49.3%) cases were PR +ve while twenty (29%) cases were Her2/neu positive.

Higher offspring number (p = 0.009) was the only significant predictor of PR positivity in MVA.

Another Logistic regression model identified diabetes(p=0.018), nipple retraction(p= 0.043) as predictors of HER2Neu positivity in univariate analysis while only presence of nipple retraction was significantly predicts HER2/neu+ve BC cases in MVA.

CONCLUSIONS

- Advanced N stage and ER positivity are significantly affecting old BC patients.
- Higher number of offspring could significantly predicts PR positive BC cases while nipple retraction is the only predictor of HER2/neu positivity among our cohort.
- Young age group should be treated aggressively.
- Neoadjuvant hormonal Tx & Herceptin should be evaluated in patients fulfilled positive predictors for PR and HER2/neu +ve BC patients respectively.