Predicting factors for pathological complete response after neoadjuvant chemotherapy in breast carcinoma -a single centre experience

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Track: Medical Professionals
Theme: Treatment

ABSTRACT

Introduction: Neoadjuvant chemotherapy plays an important strategy role nowadays in the treatment of breast cancer. Several studies suggest that patient who achieves pathological complete response after neoadjuvant chemotherapy has better prognosis. Aims: The study aims to identify the clinic-pathological factors that favor pathological complete response after neoadjuvant chemotherapy in patient with invasive breast carcinoma. **Materials and Methods:** 90 patients with invasive breast carcinoma who underwent chemotherapy followed by surgery were retrospectively analyzed in Hospital Selayang between January 2022 and March 2025. Their clinical and pathological data was collected and analysed for correlation. Miller Payne grading is used to assess pathological response of tumour. **Results:** Majority patients are triple negative subtype breast carcinoma (32%), followed by luminal A subtype (28%), Her2 enriched subtype (21%), luminal B subtype (19%). 21(23%) Patients was found achieved Miller-Payne grade 5 whereas 49 (54%) showed partial pathological response and 20 (22%) patients had no response. Majority patient who achieved pathological complete response were Her2 positive subtype (52%). The presence of Her2 positivity and hormone receptor negativity were found associated with complete pathological response. Age, race, menopause, tumour site, multicentricity, clinical T stage (cT) and clinical axillary lymph node stage (cN) have not correlation with complete pathological response. **Conclusion:** Her2 amplification and hormone receptor negativity are the predictor for pathological complete response after neoadjuvant chemotherapy in invasive breast carcinoma in our centre.

Keywords: Pathological complete response, breast carcinoma, neoadjuvant chemotherapy, predictors, miller-payne grading