

**Clinical and Biological Characteristics of Breast Cancer in Women with Mammary Paget's Disease:
A Retrospective Study of 36 cases**

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Abstract

Objective: Identification of clinical and biological characteristics of breast cancer in women with mammary Paget's disease (MPD).

Methods: We performed a retrospective analysis for 36 women with a primary diagnosis of mammary Paget's disease, patients were treated in Sant' Orsola-Malpighi Breast Unit in Italy, between 2000 and 2016. Patients demographics, clinical data, radiologic and pathologic reports were extracted from electronic health records.

Result: 36 cases of patients with a diagnosis of MPD were involved. The mean age was 64.28 years (Range, 36-86 years). Only 14 patients (38.9%) were found to have an underlying breast mass. Invasive breast carcinoma was diagnosed in 23 patients (63.9%), 7 patients (19.4%) had ductal carcinoma in situ. All patients with associated breast mass were diagnosed with invasive breast carcinoma and they had a higher rate of axillary lymph node metastasis. Most invasive breast carcinomas were HER2 positive (65.2%), estrogen and progesterone receptors negative (56.5% and 69.6%).

Conclusion: Mammary Paget's disease is a rare type of cancer that can be localized to nipple-areola complex or it can be associated with underlying breast carcinoma. Breast MRI has a higher sensitivity for identifying underlying breast pathology. Once MPD is associated with an underlying mass, the likelihood of carcinoma is higher so a biopsy is recommended. The expression of ER/PR is lower in breast carcinomas with MPD, while they have higher HER2/neu expression. Unless multifocality or multicentricity is excluded, mastectomy is the recommended surgical treatment. Sentinel lymph node biopsy should be performed to evaluate the axilla when the invasive disease is identified or a mastectomy is planned.

Key words: invasive breast carcinoma, mammary Paget's disease (MPD), Nipple Dermatitis