

Non-metastatic Metaplastic Breast Cancer; Clinicopathological Characteristics and Treatment Outcomes: A Single Institution Experience



مركز الحسين للسرطان
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Background

Metaplastic breast cancer (MpBC) represents a therapeutic challenge. We evaluated the impact of clinicopathological characteristics and treatment modalities on outcomes among MpBC patients treated at our center.

Results

124 patients with pathologically-proven MpBC were identified from our database, of whom 81 patients were eligible for the study. Median age at diagnosis was 48 years. 90.1% had pathologic G-III tumors, 64.2% were node negative and lympho-vascular invasion was absent in 72.8%. 67.8% were triple negative, and 7.4% were HER2-neu positive. Most patients underwent mastectomy (66.7%) and free margins were achieved in the entire cohort, however, 14 patients (17.3%) had close margin (<2mm). Almost all patients received chemotherapy (33 patients (40.7%) received it in the neoadjuvant settings, of whom 42.0% had disease progression and only 6.0% achieved pCR). 75.3% received radiotherapy, 23.5% received hormonal therapy and 6.2% received Trastuzumab. With a median follow-up of 54 months, 15 patients (18.5%) developed loco-regional recurrence and 28 patients (34.6%) relapsed distally. Five-year OS and EFS were 66.0% and 57.6%, respectively. On univariate analysis, adjuvant radiotherapy correlated with better OS whereas tumor size > 5cm and nodal involvement correlated with worse OS. All these variables retained significance on multivariate analysis: adjuvant radiotherapy (HR: 0.12, 95% CI, 0.04-0.35, $p<0.0001$), large tumor size (HR: 4.01, 95% CI, 1.7-9.4, $p=0.001$) and nodal involvement (HR: 4.1, 95% CI, 1.62-10.2, $p=0.003$). There was no survival difference with respect to age, triple negativity, and morphologic subtype.

Conclusions

We report the largest single institutional series on MpBC in the Middle East region. Regardless of age, receptor status or morphologic subtype, MpBC confers worse survival outcomes. More aggressive local and systemic treatment strategies should be investigated.

Methods

Women with stage I-III MpBC were reviewed from our database from 2005-2018. Kaplan-Meier method was used to calculate locoregional-failure-free survival (LRFFS), overall-survival (OS), distant-metastases-free survival (DMFS) and event-free-survival (EFS). Log-rank tests were conducted to assess associations of various variables with survival outcomes. Multivariate Cox proportional-hazards models were used to identify independent predictors of OS and EFS.

Multivariate analysis	Variable	p-value	HR	95% CI
	Loco regional recurrence			
	Tumor size	0.0335	3.168	1.094-9.173
	>5cm vs ≤5cm			
	Margin status	0.0773	0.372	0.124-1.114
	≥2mm vs <2mm			
	Distant metastases			
	Tumor size	0.0052	3.254	1.424-7.438
	>5cm vs ≤5cm			
	Nodal status	0.0853	2.051	0.905-4.651
	Positive vs negative			
	Margin status	0.3110	0.627	0.254-1.547
	≥2mm vs <2mm			
	LVI	0.0860	2.003	0.906-4.427
	Yes vs No			
	Overall survival			
	Adjuvant radiotherapy	<0.0001	0.124	0.044-0.349
	Yes vs No			
	Tumor size	0.0014	4.012	1.708-9.419
	>5cm vs ≤5cm			
	Nodal status	0.0029	4.076	1.615-10.289
	Positive vs negative			
Abbreviations: HR: Hazard Ratio, CI: Confidence Interval				

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