

Clinicopathological Profile and Outcome of Mammary Paget's Disease with and without Invasive Breast Cancer in a Tertiary Referral Centre in India

Authors: **Dibya P Behera¹**, A Mishra¹, V Agrawal², Sabaretanam M¹, G Chand¹, G Agarwal¹
¹Department of Endocrine Surgery, & ²Pathology, Sanjay Gandhi Postgraduate Institute Medical Sciences Lucknow- India

Introduction

- Evident scarcity of literature on Mammary Paget's disease (MPD)
- Primary objective of this study was to investigate clinicopathological features and outcome of MPD in patients with and without invasive cancer (IC).

Material & Methods

- Retrospective study
- January 2000-December 2022 (55 patients)
- Clinicopathological profile & outcomes were noted & compared between Group 1- MPD with IC and Group 2- MPD without IC
- Continuous data - Student's T test/ Mann Whitney U test
- Categorical and frequencies - Chi-square test
- Survival analysis - Kaplan Meier curves
- Comparative analysis - Cox-regression

Results

- The incidence of MPD among all patients with breast cancer (BC) undergoing surgery (n=2804) was 1.9%
- Incidence of IC was 83.3% and carcinoma in situ (CIS) was 53% in MPD
- All patients had nipple changes & 67% had palpable lump.

- BC was categorized as early, locally advanced & metastatic (56.5, 29 & 15.5%) respectively.
- Overall mastectomy, breast conservative surgery & axillary dissection (93%, 7% & 82%) respectively
- Radiotherapy and chemotherapy (77 and 79%) respectively.
- Incidence of Lump (p= <.001), mastectomy (p=.001), axillary dissection (p=.001) and adjuvant radiotherapy (p=.001) was significantly more in Group 1.
- Median follow-up was 26 months
- 5 year OS was 69% & 100% respectively
- DFS 72.% & 85% respectively
- Disease free survival was not different but OS (p=.05) was better in Group 2



Fig 1: clinical image of left breast with nipple changes & a lump in a MPD patient (red arrow)

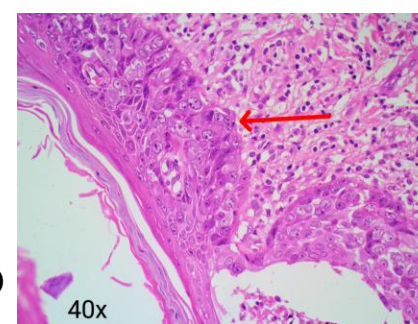
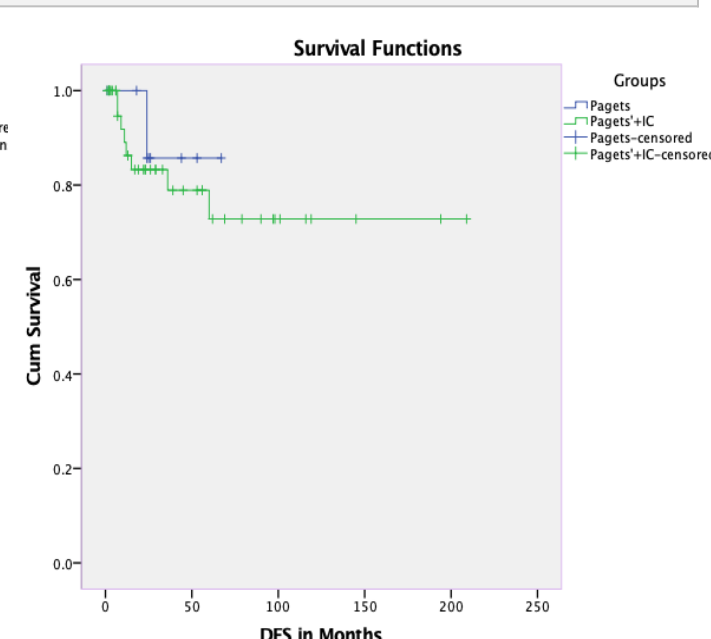
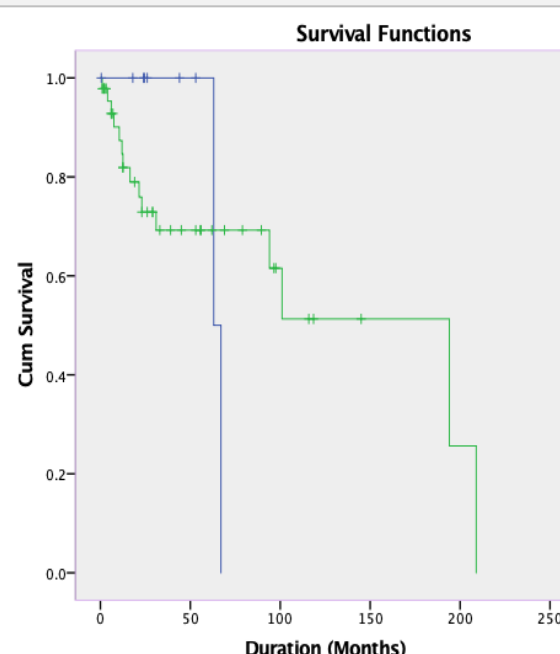


Fig 2: H & E of MPD, showing pagetoid cells at the dermo epidermoid junction (red arrow)

Table 2: Comparative Clinicopathological Profile of Group 1 and Group 2 Paget's Patients

S.no	Variables	Group 1 # (n=46)	Group 2## (n=9)	p Value
1.	Age in years (mean±SD)	54.3 ± 13.9	57.7 ± 9.9	0.14
2.	Menopausal status: n (%)			
	Pre-menopause	14(30.5)	1(11)	0.78
	Post-menopause	31(69.5)	8(89)	
3.	Receptor status ^b n (%)			
	HR receptor +ve	9 (19.6)	1 (11)	0.47
	HER- 2+ve	30 (81)	4 (57.1)	0.21
	TNBC	2 (5.4)	2 (28.5)	0.04
4.	Surgery: n (%)			
	Mastectomy	44(95.7)	7(77.8)	0.04*
	Breast Conserving	2(4.3)	2(22.2)	
5.	Radiotherapy n (%)	39(84.7)	0	0.00*
6.	Hormone Therapy: n (%)	9 (19.5)	1 (11)	0.17

- Paget's + IDC, ## - Paget's only, ^b HER 2-status available in 44 patients, HR - Hormone Receptor, * statistically significant.



Discussions & Conclusions

- Though majority of MPD patients in our centre were of early BC, one third patients presented late with advanced IC resulting in high requirement of adjuvant chemotherapy and radiotherapy
- Overall clinicopathological profile, intervention & outcome of our patients are at par with other centres
- High index of suspicion & early intervention could result in de-escalation of therapy & improved outcome

References

- Sisti A et al, Paget disease of the breast: A national retrospective analysis of the US population. Breast Dis. 2020;39(3-4):119-126
- Kar H et al, Clinicopathological features of mammary Paget's disease: a single-center experience in Turkey. Turk J Med Sci. 2021;51(6):2994-3000

Table 1 : Clinicopathologic Profile of the Whole Cohort of Paget's Disease Patients

S.no	Variables	Results
1.	Age in years (Mean ± SD)	54.9 ± 13.3
2.	Gender: n (%)	
	Female	54 (98.2)
	Male	1 (1.8)
3.	Laterality: n (%)	
	Right	29 (53)
	Left	26 (47)
4.	Menopausal status: n = 54 (%)	
	Pre -menopausal	15 (28)
	Post -menopausal	39 (72)
5.	Clinical Presentation : n (%)	
	Lump	29 (52.7)
	Nipple changes	55 (100)
	Both	8 (14.5)
6.	Nipple changes : n (%)	
	Ulcer	21(38.2)
	Excoriation	25 (45.5)
	Retraction	5 (9.1)
	Discharge	4 (7.2)
7.	Duration of disease in months (Mean ± SD)	17.9 ± 18.3
8.	Histology: n (%)	
	Paget's only	2 (3.6)
	Paget's + DCIS	7 (12.7)
	Paget's + IC	46 (83.7)
9.	Tumour Receptor status: n (%)	
	HR	9 (20)
	Her 2 Neu	30 (68)
	TNBC	1(3)
10.	Tumour size in mm (Mean ± SD)	27.7 ± 23.1
11.	Surgery : n (%)	
	Mastectomy	51(93)
	BCS	4 (7)
12.	Adjuvant Radiotherapy n (%)	45 (82)
13.	Duration of Follow up [Median (IQR)]	26 (7-56)