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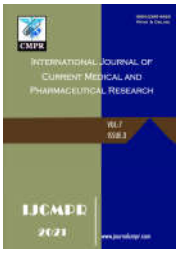

Research Article

TREATMENT OUTCOMES OF SQUAMOUS CELL CARCINOMA OF VULVA OPERATED AT TMC KOLKATA

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ABSTRACT

Vulval cancers account for only 2-5% of all gynaecological malignancies with squamous cell carcinoma (SCC) being the most common subtype. Treatment is predominantly surgical however concurrent chemoradiotherapy (CTRT) is also an alternative for advanced tumours.

We present our experience in SCC vulva cases diagnosed and operated at TMC, Kolkata (TMCK). The objective was to study the clinical profile and treatment outcome of operated vulval SCC with multimodal therapy at TMCK. This was a retrospective study with data collected from the hospital electronic medical records. The inclusion criterion was all histologically confirmed vulval SCC cases operated at TMCK with the study period from August 2011 to September 2019. A total number of 40 patients met criteria.

The median age of the patients was 63.5 years with good PS in all except one patient. However 72.5% patients had associated co-morbidities. Majority 40% patients belonged to stage I followed by stage III (35%). 5% patients belonged to stages II and IV whereas 15% patients remained unstaged.

Most common surgery performed was modified radical vulvectomy (MRV) + B/L groin node dissection (GND) in 15 (37.5%) followed by MRV in 20% patients. 15% also underwent reconstructive surgery and 2.5% underwent exenteration. Wound dehiscence was seen in 42.5% patients. Postoperatively adjuvant treatment was indicated in 50% patients but received in only 30% (20% radiotherapy and 10% chemoradiotherapy).

On follow up, 67% patients were alive without disease, 10% alive with disease, 32.5% recurred amongst which 30.7% had a second recurrence. 15% patients died whereas 7.5% were lost to follow up. The estimated 5 year recurrence free survival (RFS) was 70% whereas the estimated 5 year overall survival (OS) was 85%.

INTRODUCTION

Vulval cancers account for only 2-5% of all gynaecological malignancies with squamous cell carcinoma (SCC) being the most common subtype. Despite vulva being an external organ, delayed diagnosis has been a typical observation in this disease. Vulval cancers is predominantly a disease of older women but significant increase in younger women in recent decades[1-4] has been observed owing to changing sexual behaviour, human papillomavirus (HPV) infection and cigarette smoking[5].

Radical vulvectomy with inguinofemoral lymph node dissection was introduced in gynaecological oncology practice in 1960's and has become the standard practice in invasive vulval cancer. However the associated physical and psychological problems have led to the introduction of more conservative procedures [6,7].

MATERIALS AND METHODS

This is a retrospective study in which data was collected prospectively from hospital electronic medical records. All patients with histologically confirmed SCC vulva and operated at TMCK from August 2011 to September 2019 were included. A total number of 40 patients met criteria. This study was approved by the institutional board with IRB.

Clinical profile, stage of presentation, and previous treatment received (surgery, radiotherapy or chemoradiotherapy) was seen. Treatment outcome and disease free interval were ascertained.

The data was analysed using SPSS software. Kaplan Meier survival curves were plotted for disease-free survival and overall survival.

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RESULTS

During this 8 year period, a total number of 40 patients were admitted and operated at our hospital. The median age of patients was 63.5 years ranging from 32-86 years. All except one had good performance status. The most common complaint was vulval irritation and burning. All except 2 patients were older than 35 years. 29 (72.5%) patients had associated co-morbidities which were mainly diabeters and hypertension. Mean tumour size was 4.075 cm ranging 1-9cm. 20% patients had past treatment in the form of excisional biopsy (75%) and vulvectomy (25%). 20% patients received prior treatment in the form of CTRT.(Table 1)

Table 1

Demography	
Median age (range)	63.5 (32-86)
ECOG	All except 1 with ECOG 0-1
Co-morbidities	72.5% (n=29)
Mean tumour size (range)	4.075 cm (1-9 cm)
Past treatment	20% (n=8, 6 excisional biopsy, 2 vulvectomies)
Prior CTRT	10% (n=4, 2 at TMC, 2 outside)

Majority 40% patients belonged to stage I followed by stage III (35%). 5% patients belonged to stages II and IV whereas 15% patients remained unstaged. (Figure 1)

Majority 15 (37.5%) underwent MRV + B/L GND followed by 8 (20%) patients who had MRV. 15% had additional reconstruction. 10% had MRV + U/L GND. 5% patients underwent MRV+ B/L GND + PLND and wide local excision (WLE) each whereas 2.5% patients underwent b/l GND, Exenteration + GND and MRV + sentinel lymph node biopsy (SLNB) respectively. Sentinel lymph node biopsy was performed in view of anticipated morbidity of GND of elderly patient (86 years). Total 29 patients underwent GND out of which 17 (58.6%) were positive. Positive groin nodes were seen in tumour size >= 3cm.

Table 2

Type of surgery	% of patients
MRV + B/L GND	37.5% (15)
MRV+ B/L GND + reconstruction	15% (6)
MRV + U/L GND	10% (4)
MRV + B/L GND + PLND	5% (2)
MRV + SLNB	2.5% (1)
MRV	20% (8)
Exenteration + GND	2.5% (1)
B/L GND	2.5% (1)
WLE	5% (2)

Table 3

Adjuvant treatment	
Radiotherapy	8 (20%)
CTRT	4 (10%)
Denied	5 (12.5%)
Omitted	2 (5%)
Lost to follow up	1 (2.5%)
Not indicated	20 (50%)

Postoperative period was uneventful 57.5% patients whereas 42.5% patient developed wound dehiscence. Adjuvant treatment was indicated in 50% patients amongst which 20% received radiotherapy, 10% CTRT, 12.5% denied, omitted in 5% and 2.5% patients were lost to follow up (Table 3).

Follow up details showed 27 (67%) patients were alive without disease, 4 (10%) alive with disease, 13 (32.5%) recurred amongst which 4 (30.7%) had a second recurrence. 6 (15%) patients died whereas 3 (7.5%) were lost to follow up. (Table 4).

Main sites of recurrences were vulva and groin with associated distal metastasis in 38% patients.

Table 4

Follow Up Details	
Alive without Disease	27
1st Recurrence	13
2nd recurrence	2
Alive with disease	4
Lost to follow up	3
Died	6

Upon recurrence, 6 patients underwent salvage surgery, 5 received palliative chemotherapy, 1 patient had CTRT whereas 1 declined further treatment.

The estimated 5 year recurrence free survival (RFS) was 70% (figure 2) whereas despite 13 recurrences, overall survival was good (85%) (figure 3).

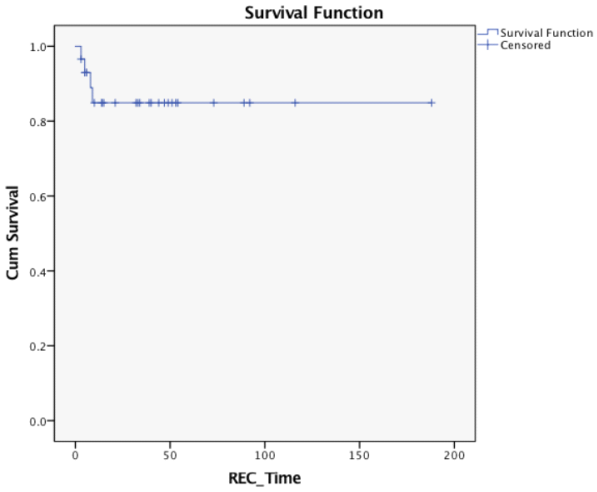

Figure 2

Recurrence details													
Serial No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Prior stage	II	IVA	IIIC	IB	IVA	IB	UN	IIIC	UN	IB	IB	IIIC	IIIA
Tumour size (cm)	2.5	4	9	2.8	7	3	7	3	5.5	3	2	8	4
Surgery	WLE	MRV+ B/L GND + Reconstruction	MRV+ B/L GND + PLND	WLE + U/L GND	Anterior exenteration + radical vulvectomy + B/L GND + reconstruction	MRV+ U/L GND	MRV+ B/L GND + Reconstruction	MRV+ B/L GND	MRV	MRV+ U/L GND	MRV	MRV+ B/l GND	MRV + B/l GND
Margins (mm)	UN	2	Positive	7	4	1	UN	10	13	>10	dVIN	dVIN	VIN1-2
LN metastasis	Negative	Positive	Positive	Negative	Negative	Negative	UN	Positive	UN	Negative	UN	Positive	Positive
Recurrence	Local	Distal	Local + distal	Local	Distal	Local	Local	Local	Distal	Local	Distal	Distal	Local

All the patients who had received palliative care have died. Additionally one patient who had undergone MRV + B/L LND + reconstruction died of septicemia from flap.

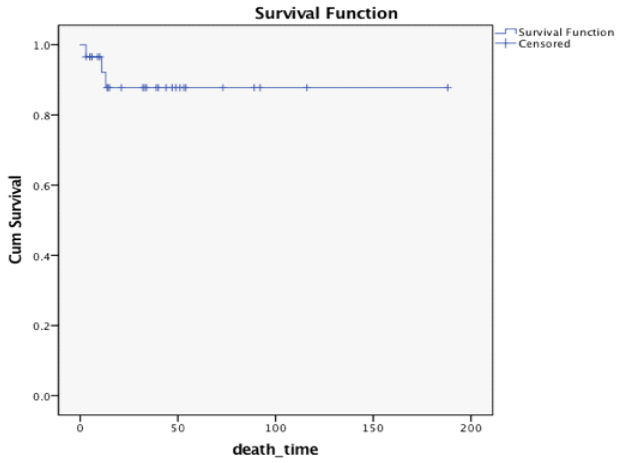

Figure 3

DISCUSSION

With the recent emphasis of self awareness an increasing number of patients are presenting with early stage disease. An estimated two third patients now present with stage I-II vulval cancer[8]. Our series show 45% patients in early stages at the time of diagnosis.

Arvas *et al*.[9] in their retrospective series of 92 patients of SCC vulva treated surgically stated a wound complication rate of 43%. Our series also show a complication rate 42.5%.

Bosquet *et al*.[10] shows a lymph node positivity rate of 34% whereas it is 58.5% in our study. This could be due to the fact that unlike their series where all patients underwent lymphadenectomy, we performed selective lymphadenectomy depending upon tumour size and margin status.

One patient in our study underwent sentinel lymph node biopsy with a tumour size of 5 cm in view of anticipated morbidity of GND in advanced age. Surgery was restricted to MRV as sentinel lymph node was negative. Terada *et al*.[11] in their retrospective series of 21 patients having undergone SLNB reported excellent results in disease prognosis. None of the patients with sentinel lymph nodes developed groin recurrence. However other studies [10-14] have demonstrated both detection failure and groin recurrences.

Recurrent vulval cancer has been reported to occur in around 24% cases after primary surgery with or without adjuvant radiation treatment[15]. Our study shows a recurrence rate of 32.5%.

Cheng *et al*.[16] and Woelber *et al*.[17] in their retrospective series of 100 patients and 103 patients respectively, established advanced age and LN status to be the strongest risk factors for recurrence. Similarly in our study the overall median age is 63.5 years but among the patients with recurrence, it is 69 years. However LN status was insignificant for recurrence in our study.

Zanvettor *et al*.[18] In their retrospective series of 75 patients having undergone primary surgery stated tumour size more than 4 cm to be related to poor overall survival. All 6 patients who died in our study had a tumour size more than 4 cm.

One patient with local recurrence received CTRT and is still alive with disease. Liliscia *et al*[19]. In their study of adjuvant radiotherapy in recurrent vulval cancer after primary radical surgery showed 70% mortality even after complete response in local relapse cases.

Studies have demonstrated two third recurrences to be local [20,21]. In our study 53.8% patients had local recurrence. All the patients with local recurrence underwent surgery and are alive without disease.

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