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Original Article

Prevalence of Vulva Carcinoma at BP Koirala Memorial Cancer Hospital, Nepal: a Hospital Based Retrospective Study

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ABSTRACT

Background: Vulvar cancer is not an uncommon condition and accounts for 4-6% of genital tract cancers in females. More than ninety percent of such cancers are squamous cell type. In this study, we attempted to analyze the demographic and clinicopathological profile of vulvar cancer cases over 10 years.

Methods: This descriptive study was conducted at BP Koirala Memorial Cancer hospital, Nepal. The demographic and clinicopathological profile of all patients diagnosed as Squamous Cell Carcinoma of Vulva between January 2009 to December 2019 were evaluated. Tumour staging was standardized according to the International Federation of Gynecology and Obstetrics (FIGO) system. All the quantitative data and qualitative variables were analysed with SPSS software (SPSS Inc., Chicago, IL, USA, version 16.0).

Results: Among 77 patients, the median age was 55 years. Most were married (97.4%, n=75), and were illiterate (61%, n=47). Forty-five percent (n=35) were smokers and sixty percent (n= 46) were from terai area. Most patients presented with growth (88.31%, n=68) over vulvar region. Palpable inguinal lymph nodes were present in 80.5% (n=62) of patients. Forty percent (n=31) were diagnosed at clinical stage III followed by stage IV (27.2% n=21). Most common histological grading was moderately differentiated SCC (50.6%, n=39). Management was Surgery in 72.72% (n=56) patients and rest 27.2% (n=21) sent for chemo radiation. The most common postoperative complications were lymphedema (27%, n= 15) and wound infections (12.5%, n=7). Recurrence was observed in 28.57% (n=22) of cases.

Conclusions: Vulvar cancer is common among middle-aged married women. The disease may be locally advanced at diagnosis. Public awareness of the disease severity and timely health care seeking behaviour is still lacking. Surgery with or without chemo-radiation is the treatment modality.

Keywords: Vulval cancer, lymph node dissection, smoking, recurrence, squamous cell

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INTRODUCTION

Vulvar cancer is not an uncommon condition in south Asian countries. This accounts for 4-6% of all female genital tract cancers and 0.6% of all cancer in women1. Previously it was considered a disease of old post-menopausal women, however, its incidence is increasing among younger age group females. This may be attributed to HPV infections and cigarette smoking. Other proven risk factors are VIN, Lichen sclerosis, alcohol consumption, obesity, immunosuppression, and history of cervical cancers. More than 90% of vulval cancers are Squamous cell carcinoma (SCC) which is further divided into Warty type (40%, usually seen in younger patients) and keratinizing type (60%, seen in older patients)[2] Surgical tumour excision with radical lymph node dissection is the mainstay of treatment wherever possible with radiotherapy and chemotherapy in advanced cases. Disease being a rare entity, a limited number of studies are available from developing countries like ours. In this study, we attempted to analyze the demographic and clinicopathological profile of vulvar cancer managed at BP Koirala Memorial Cancer Hospital over ten 10 years.

MATERIALS AND METHODS

This descriptive study was conducted at BP Koirala Memorial Cancer hospital (BPKMCH), Bharatpur, Nepal. The demographic and clinicopathological profile of all patients diagnosed as SCC of Vulva and visited Gynae- Oncology Unit between January 2009 to December 2019 were evaluated. Patients were selected as per the whole sampling method. Ethical approval was taken. Variables collecting patient and disease characteristics including pathological stage were included. Tumour staging was standardized according to the International Federation of Gynecology and Obstetrics (FIGO) system. All the quantitative data and qualitative variables were analysed with SPSS software (SPSS Inc., Chicago, IL, USA, version 16.0).

RESULTS

Altogether 115 cases were retrieved for review from January 2009 to December 2019. Out of which, only 77 patients had histologically proven SCC were included in the study. Rest 17 cases who had lost follow-up and 21 cases with incomplete data were excluded from this study. In this study, the median age was 55 years with mean ± SD of 54.15 ± 14.49 years. Most of the patients were married (97.4%, n=75), and were illiterate (61%, n=47). Forty-five percent (n=35) were smokers and sixty-five (n=50)

Table1: The clinicopathological characteristics of the vulvar cancer patients

Chief complaints	Growth/ulcer	88.31% (68)
	Itchyness	71.4% (55)
	Bleeding	35% (27)
Inguinal lymph nodes	Palpable	80.5% (62)
	Not Palpable	19.4% (15)
	Fixed/fungating	26% (20)
Clinical stage	Stage I	13% (10)
	Stage II	19.4% (15)
	Stage III	40.25% (31)
	Stage IV	27.2 (21)
Surgical procedure	Wide Local Excision	11.68% (9)
	Radical Vulvectomy with Unilateral/ Bilateral ILND	61% (47)
	Direct Chemoradiation	27.27% (21)
	Combined Modalities	47% (36)
Grading	Well-Differentiated	40.3% (31)
	Moderately Differentiated	50.6% (39)
	Poorly Differentiated	9.1% (7)

Table 2: The demographic and socioeconomic profile of the vulvar cancer patients

Age	Mean±SD	54.15 ± 14.49
	Median age	55 years
Marital Status	Married	97.4% (75)
	Unmarried	2.6% (2)
Personal hygiene	Poor	65.6% (50)
	Good	35% (27)
Smokers	Smokers	45.45% (35)
	Non-smokers	54.54(42)
Education level	Illiterate	61% (47)
	Primary level	36.4% (28)
	Secondary and above	2.6% (2)
Profession	Agriculture	53.2% (41)
	Housewife	41.6% (32)
	Business	5.2% (4)

*separated, widow, Divorced

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percent maintained poor personal hygiene. Sixty percent (n= 46) were from terai area and fifty-three (53.2%, n=41) percent were related to farming. (Table 2)

Most patients presented with growth (88.31%, n=68) over vulvar region are followed itching (71.4%, n= 55) by bleeding (35%, n=27). Palpable inguinal lymph nodes were present in 80.5% (n=62) of patients, out of which in 26% (n=20) of patients the lymph nodes were fixed and fungating. Forty percent (n=31) were diagnosed at clinical stage III followed by stage IV (27.2% n=21), stage II (19.48 %,n=15) and Stage I (13 %,n =10). Most common histological grading was moderately differentiated SCC in 50.6%(n=39) of cases followed by well-differentiated SCC in 40.3% (n=31) of cases followed by poorly differentiated SCC in 9% (n= 7) of cases.

Surgery was the mainstay of management in 72.7% (n=56) of patients. Sixty-one percent (n= 47) of patients underwent radical vulvectomy with inguinal nodal dissection and 11.68% (n=9) only underwent wide local excision. Those patients who had fixed and fungating lymph nodes and were unfit for surgery (27.27%, n=21) were directly sent for chemotherapy and

radiotherapy after biopsy. Similarly, among patients who had groin dissections, 65.9%(n=31) had histopathological proven positive lymph nodes, were sent for adjuvant chemotherapy and radiotherapy. Postoperatively, the most common complications were lymphedema (27%, n= 15), wound infections (12.5%, n=7) and lymphocele 3.5%, n=2). However, Recurrence was seen in 28.57% (n=22) of cases. (Table 1).

DISCUSSION

Vulvar cancer is more among older women causing a significant impact on the quality of life. Amanvi et al. found the disease to be prevalent among women above 50 years of age.[3] Meelapkij et al. found 9.3% of patients are below 40 years of age. [4] In the present study median age was 55 years and 22% of the patients were below 40 years.

Smoking is a well-known risk factor for vulvar cancers and there is an association between vulvar cancer and smoking depending on the dose and duration of exposure.[2] This is because the nicotine in tobacco is carcinogenic. Cigarette smoking causes a genetic modification in IL2 and that further increases the susceptibility to HPV virus infection.[5] Up to 80% of cases were found to be smokers in many studies, which was noticeably less in our population.

Public awareness and stigma regarding disease puts a significant impact on the timely seeking medical help. Most of the cases are diagnosed at an advanced stage in developing countries. Meelapkij et al conducted a study among 145 cases over 10 years and found the majority of cases being diagnosed at stage III (30.4%) and only 6.5% diagnosed at stage I.[4] Likewise, Sharma et al in 2018 studied 60 cases and found 31% of their cases were at stage III and only 2% in stage I.[6] This present study showed most of the cases in stage III/ stage IV and only 13% in stage I. This is in contrast to the finding in developed countries where most of the cases were found at earlier stages (Stage I /II). Similarly, Bogani et al. in their study among 101 cases from 1990 to 2013 found 63% of cases at stage I. Rao et al studied 1352 cases from the national cancer database, found 55% of cases at stage II.[7,8] Most common histopathological grading in other studies was well-differentiated SCC however in our study this was moderately differentiated SCC.[8, 9] The treatment modalities for vulvar cancer depends on the stage of disease at diagnosis. It requires multimodality treatment including surgery, chemotherapy, and radiotherapy. Surgery should be done wherever possible. Surgical treatment involves wide local excision/ radical vulvectomy with inguinal lymph node dissection. Inguinal lymph node dissection has a prognostic role. Le.T et al mentioned that the total number of nodes removed during the surgery itself is an independent prognostic factor for survival.[10]

In advanced cases, chemotherapy and radiotherapy are preferred. Most of the patients in the advanced stage present with palpable inguinal nodes, some may be fixed and fungating. National Cancer database shows combined chemoradiation increases the overall survival of patients than radiation alone.[8] Stehman et al supports that inguinal node-positive cases should receive radiation therapy to the ipsilateral groin and hemipelvis.[11] Series of studies assumes that radiotherapy or chemoradiation in locally advanced and unresectable disease is well tolerated and provides alternative methods to avoid extensive surgeries.[11-13] Rogers et al even claimed that less than one-third of their cases with primary chemoradiation had complete responses and had an increased survival rate.[12] Mostly due to late presentation, higher number of patients were treated with combined modality(46%) and chemoradiation only (27.27%) in ours set up. Postoperatively, the local recurrence rate is found to be more than 25%. Similarly, in our study the recurrence rate is 28.57%.[10]

The present study also has some limitations. The long-term follow-up and long-term survival were not evaluated. HPV infection prevalence and response to therapy were also not evaluated. The results of this

study being hospital-based single institute analysis may not correlate with the entire population. Survival analysis and response to therapy need to be addressed in future studies.

CONCLUSION

Vulvar cancer is common among middle-aged married women. The disease may be locally advanced at diagnosis. Public awareness of the disease severity and timely health care seeking behaviour is still lacking. Surgery with or without chemo-radiation is the treatment modality.

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