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ORIGINAL ARTICLE

DEMOGRAPHIC CHARACTERISTICS AND THE CLINICAL PROFILE OF VULVAR CANCER PATIENTS TREATED ATTIKURANBESSA SPECIALIZED HOSPITAL, A FIVE YEARS RETROSPECTIVE STUDY

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ABSTRACT

Introduction: *Vulvar cancer is a rare disease that occurs most often in older women; however, this is not seen in clinical practice at TikurAnbessa Specialized Hospital (TASH). Overall there is limited information regarding vulvar cancer in Ethiopia.*
Aim: *The aim of this study was to describe demographic characteristics and the clinical profile of Vulvar Cancer patients treated at TASH.*
Methods: *This is a retrospective study. Data on primary vulvar cancer patients were collected from patients' chart between August 2012 and July 2017 and analyzed.*
Results: *A total of 118 study participants' charts were reviewed. The median/mean age was 39/43.17 ranging from 22 to 85 years. The patients presented with more than one symptom. The mean duration of the symptoms was about 2 years. Labium majus(91.5%), labium minus (89%) were mainly affected. In most (79.7%) patients the disease was locally advanced. Sixty six percent of the cases were positive for HIV.The mean/ median duration of HIV infection was 72.14/72 months. All of them were taking HAART. The majority 38 (32.2%) were treated with chemoradiation followed by surgery alone (16.9%). A Surgical procedure was done for 22 patients. Few patients developed complications.*
Conclusions*: In this study the burden of VC is higher among young and HIV positive women. Most women present in late stage of the disease despite visiting a health care facility for HIV care/HAART and long standing symptoms.*
Recommendations: *Creating awareness of patirnts on vulvar cancer, particularly HIV positive ones, and health care providers may ameliorate the disease burden in Ethiopia.*
Key words: *Cancer, vulva cancer, demographic aspect, clinical profile, HIV*

INTRODUCTION

Vulvar cancer is a rare gynecological cancer, accounting for 3 to 5 % of gynecological cancers(1, 2). The disease occurs mainly among women in the age of 50s or 60s(3-5). About 15% of vulva cancers occur in women <40 years and could be due to human papilloma virus infection (HPV)(6). Unlike in developed nations, it is diagnosed in late stage in less developed countries(5, 7). The main presenting symptoms of patients are genital mass, genital or vulvar pruritis, genital ulceration, vulvar pain; of which genital tumor and genital itching are most common, accounting for 70.59% and 56.47% (8-10), respectively.

The occurrence of Vulvar cancer in younger women is increasing all over the world due to High Risk-HPV (HR-HPV) infection. Human immunodeficiency virus (HIV)-positive women are at increased risk for persistent HPV infection.

In the advent of highly active antiretroviral therapy (HAART) in the recent decades, HIV positive patients live long and acquire HPV related cancers including vulvar cancer(11).To the best of our knowledge, there has been no specific study about vulvar cancer in Ethiopia. This study was done to describe the demographic characteristics and clinical profile of vulvar cancer.

METHODOLOGY

Study design: Is a retrospective case-series study.
Study area and period
The study was done over the period of August 2012 to July 2017. It was conducted in Tikur Anbessa Specialized Hospital, a teaching University Hospital found in the capital city of Ethiopia. It has different departments and specialized units including gynecology oncology, and radiation and medical oncology units.

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The radiation unit is the only center for the country.

Study Population
All patients with a diagnosis of primary vulvar cancer managed at either the gynecology oncology unit or the radiotherapy unit at TASH during the study period.

Inclusion and Exclusion Criteria
All the patients who had histologically confirmed primary vulvar cancers were included in the study. Those with secondary vulvar carcinoma were excluded.

Data collection tools and procedures
Data were collected using a self-prepared and anonymous questionnaire to gather relevant data from the patients' files. The questionnaire had two parts, namely, the sociodemographic characteristics and the clinical profiles of the patients. The tool was pretested at Zewditu Memorial Hospital. Data were collected by Interns, who were trained for a half-day on the objective of the study and the data collection tool. At each step, the principal investigator checked for the completeness of data. Data were cleaned, coded, and entered using SPSS. Results were presented using proportions and percentages.

RESULTS

Socio-demographic profiles
One hundred eighteen charts of primary vulvar cancer patients were able to be retrieved.
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Table1 shows the socio-demographic characteristics of the 118 VC cases. The median/mean age was 39/43.17 ranging from 22 to 85 years.

Presenting symptomsand HIV Status
As shown in table 2, the patients often presented with more than one symptom, the commonest being vulvar mass (76.3%) followed by ulcer (47.5%). In most (79.7%) patients, the disease extended to the adjacent involved organs beyond the vulva, including vagina (46.6%), anus (29.7%), urethra (22.9%) and inguinal lymph nodes (45.8%). The mean diameter of the lesion was 5.89cm (range 1 to 20cm). The mean duration of the interval between the onset of the symptoms and first medical consultation was 25.43 months (range 1 month to 168 month).

Seventy eight (66.1%) patients were HIV positive. Most (83%) of the HIV positive patients were lying between the age of 22 and 40 years. The duration of HIV infection ranged between 5 and 204 months. Of note, 52.5% of patients had HIV infection for 1-24 months. All(78) of them were on HAART.

Table 1: Socio-demographic characteristics of the patients (n=118)

Variable	Frequency	Percent
Age (years)		
Mean	43.17	
Median	39.00	
22-29	18	15.3
30-39	42	35.6
40-49	23	19.5
50-59	16	13.6
60-69	11	9.3
70+	8	6.8
Total	118	100
Residence (Regions)		
Addis Ababa (Capital city)	44	37.3
Oromia	34	28.8
Amahara	26	22
Tigray	8	6.8
Others	6	5.1
Marital Status		
Single	4	3.4
Married	101	85.6
Divorced	8	6.8
Widowed	1	.8
Unknown	4	3.4
Parity		
Mean No of children	2.66	
Nullipsrous	19	16.1
1-4	81	68.6
5+	18	15.3

Treatment modalities and complications
Of 118 patients, shown in table 3, 30 (25.4%) were scheduled for treatments that were not provided, including 12.7% scheduled for radiotherapy, 10.2% for chemo-radiation and 2.5% for surgery.

A surgical procedure was done for 18.6 % of the patients, consisting of Local vulvectomy and bilateral inguinofemoral lymphadenectomy 12(54.5%), radical vulvectomy and bilateral inguinofemoral lymphadenectomy 9(41%) and excisional vulvectomy1(4.5%). Five (23.7%) of the women developed complications including wound infection. Of this women, 2(9%) patients, vaginal stenosis 2(9%) and 1(4.5%) developed wound break down, delayed healing, lymphocyst and altered skin pigmentation.

Table 2: Clinical characteristics and HIV status of the patients (n=118)

Variable	Frequency	percent
Symptoms		
Vulvar mass	90	76.3
Ulcer	56	47.5
Pruritus	50	42.4
Pain	40	33.9
Discharge	54	45.8
Bleeding	32	27.1
Others	7	5.9
Mean duration (months)	25.43	
Sites of lesion		
Confined to vulva	24	20.3
Extension to adjacent organs	94	79.7
Mean largest diameter (cm)	5.89	
HIV status		
Negative	38	32.2
Positive	78	66.1
Unknown	2	1.7
HIV Pos age category		
22-30	16	20
31-40	49	63
41+	13	17
HIV duration (months)		
Mean duration	72.14	
1 month - 24 month	62	52.5
25month – 48 month	4	3.4
49 month – 72 month	19	16.1
73 month – 96 month	10	8.5
97+	23	19.5

Table 3: Types of Treatment (N=118)

Variable	Frequency	percent
Type of treatment		
Surgery scheduled that were not done	3	2.5
Radiotherapy scheduled that were not given	15	12.7
Chemoradiation scheduled that were not given	12	10.2
Chemoradiation given	38	32.2
Radiation alone given	17	14.4
Chemotherapy alone	11	9.3
Surgery done	20	16.9
Surgery followed by chemoradiation	2	1.7

DISCUSSION

Vulvar cancer is typically a disease of elderly women. The median age in some developed countries were between 65 to 70 years(3,5, 7). Studies in two West African countries showed a higher incidence of the disease in older women; in Burkina Faso the mean age was 57, and it was 56.3 in Ghana (5).

The median/mean age was 39/43.17 in our patients. Similarly, other authors in both hemispheres have noted a lower age of onset(12, 13, 15). In this study, as most of the women are HIV positive and most (91%) of those women are in the younger age group (less than 50); this probably explains the difference in the age distribution with other studies. The age distribution of vulvar cancer in this study is also similar with that of cervical cancer in this country (24), and may have similar etiologic factors.

The young age at presentation of our population, and the stage at presentation lend a huge challenge to the management and subsequent adverse outcomes for these women with respect to familial, sexuality, fertility and psychosocial outcomes. The high rate of HIV positivity in our vulvar cancer population is not surprising given their young age, and Ethiopia's high adult HIV infection prevalence (30) as compared to that of developed countries and West Africa. It is, however, surprising that those women are doing well on HAART and are receiving long term facilities care at HIV/HAART health. We propose that a first steps towards awareness and potential of earlier diagnosis would be the education of Health care workers at these facilities and the inclusion of an assessment of gynecologic symptoms at each visit with direct referral to a gynecologist as indicated.

HIV positive patients have been shown to be at increased risk of persistent HPV infection. Persistent high risk-HPV infection is associated with essentially all squamous cell carcinoma of the cervix, 80% to 90% of anal cancers, a higher proportion of vaginal and vulvar cancers and with oropharyngeal-cancer(23).

In the review of the literature assessing the relationship between HR-HPV and vulvar cancer, Smith *et al* (27), noted 40.1 % prevalence in vulvar cancer. Faber *et al* also noted a similar pooled prevalence of HPV at 39.7% (CI: 35-44.4%) (28) in their updated review of 64 papers with 5015 cases of vulvar cancer. Siriaunksul *et al* noted a 40% prevalence of vulvar cancer in Thailand(29).

Our study could not assess HPV prevalence, but we showed that most of the patients were younger and HIV positive. As in other studies (90%-95%) squamous histology was the most common type of vulvar carcinoma in this study(5, 7, 13, 19).

This study indicates that most patients were from Addis Ababa, the capital city of Ethiopia, where this hospital is located. This is again similar to the pattern noted with cervical cancer(24). A number of factors could account for this including the ability to travel for care, poor knowledge of VC in outlying areas and misidentification of the actual place of residence at the time of registration due to staying with family who reside in Addis Ababa. In literature pruritis is the most common and long lasting reported symptom of vulvar cancer, followed by vulvar bleeding, discharge, dysuria and pain(25). In our patients genital mass is the most common presenting symptom (76.3%) followed by ulcer (47.5%). Pruritus is still the significant presenting symptom.

The difference may be due to the associated lichen sclerosis in older patients in the other studies. In Burkina Faso, pain and ulceration are also the main presenting symptoms(5) while in Ghana(7) swelling and ulceration are most common.

The larger size, mean diameter of the largest ulcer and mass is 5.89 cm (range 1 cm to 20 cm), the multiple lesion and bilateral involvement of the vulva are strikingly important finding in these patients which would be consistent with HPV related cancers. It also contributes to the challenge of an adequate primary surgical resection even if not metastatic which is why most of the patients were not treated with surgical resection.

In the USA, 90% of cases of vulvar cancer are diagnosed with *in situ* or early invasive stage(22). However, this study is consistent with the findings of studies in Burkina Faso and Ghana in which most of the patients presented with locally advanced stage (4,5,7). This has a deleterious effect on the outcome of the disease. Most of our patients sought medical care after several months of the onset of the symptoms. Similarly the Ghana women consulted professionals after failure of improvement following consultations of other alternatives that led to advanced stage.

We plan to determine the primary factors that contribute to late presentation and to make recommendations to address them. Surgical removal of the primary tumor and inginal lymph nodes remains the corner stone of the treatment of vulvar cancer with strong trends towards a less radical more conservative, and more individualized approach in early stage disease.

Radical partial vulvectomy in localized lesion with SLN biopsy is suggested with favorable outcomes but not an option in Ethiopia. Chemoradiation is indicated for advanced cases(7, 13, 19, 22). In our study, 9 out of 22 patients underwent radical vulvectomy and bilateral inguinofemoral lymphadenectomy due to large tumor size and multiple localities while 12 underwent a smaller vulvectomy and bilateral inguinal lymphadenectomy. Post operative surgical complication rate and severity were relatively low, 5 out of 22 patients. This could be due to the retrospective nature of the study and post operative follow up is not always consistent in our population.

Conclusions

In this study, the burden of vulvar cancer is higher among young and HIV positive women. Most of them present at a late stage of the disease despite visiting health care facilities for HIV care/HAART and long standing multiple symptoms.

Recommendations

Creation of awareness of patients onvulvar cancer, particularly those who are HIV positive and health care providers and the inclusion of a gynecologic assessment of symptoms at each visit with direct referral to a gynecologist as indicated would allow earlier diagnosis, either at premalignant or early stage of the disease, and may ameliorate the disease burden in Ethiopia. HPV serotype study and HPV vaccination, which has been provened to be highly effective against ano-genital disease, could make an important contribution to the reduction of the risk of VC in these young women.

Ethics Considerations

The study was approved by the Department of Obstetrics and Gynecology Research and Publication Committee and Institutional Review Board (IRB) of College of Health Sciences, Addis Ababa University for ethical clearance (Protocol number AAUMF 03-008). All procedures were followed in accordance with the ethical standards. Permission was obtained from the department of medical and radiation oncology, and an outpatient department to access the patient medical records.

Competing Interests

There is no conflict of interests to declare.

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