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Vulvar cancer in Tunisia: Epidemiological and clinicopathological features multicentric study

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ABSTRACT

Objective: To describe for the first time the epidemiologic and clinico-pathologic characteristics of vulvar cancer in Tunisia.
Design: Two parts are distinguished in this study:
Part1: Multicentric retrospective study about the characteristics of all cancer cases diagnosed during a 17-years period (January 1998–December 2014) in three departments of Gynecology and Obstetrics: one in south Tunisia and two in the capital.
Part 2: To determine the Incidence trend of invasive vulvar cancer in North Tunisia 1994–2009, on the basis of North Cancer Registry of Tunisia.
Results: A total of 76 cases of vulvar cancer were recorded. The median age at diagnosis was 65.4 years and 86.9% of patients were more than 55 years old. The symptomatology was dominated by vulvar pruritus in 48.7%. The average size of the tumor was 3.96 cm. Stage III was the most frequent (53.7%) followed by stage II (28.3%). Only 10.4% of tumors were at stage I. The most common histologic type of vulvar malignancy was squamous cell carcinoma (SCC) (94.7%).
Standardized incidence varied from 1.2/100 000 (1994) to 0.5/100 000 (2009). There was significant decrease of Standardized incidence (APC of −8.8% per year, 95% CI: −5.5%, −9.0%–$p < 0.001$).
Conclusion: Vulvar cancer in Tunisia is a rare disease, occurs mostly in elderly women, and is diagnosed at advanced stages. Our findings emphasize that a greater effort should be made to facilitate early diagnosis, as treatment in earlier stages is less extensive and potentially curative.

Introduction

Vulvar cancer is the fourth most common gynecologic cancer and represents 5% of all malignancies of the female genital tract (after cancer of the uterine corpus, ovary, and cervix) [1]. The most common histologic sub-types of vulvar cancer is squamous cell carcinoma, which accounts for about 90% of malignant tumors, whereas melanoma, basal cell carcinoma, adenocarcinoma, sarcoma are less common [2].

The aim of this study was to determine and to identify the epidemiologic and Clinico-pathologic characteristics of vulvar cancer in Tunisia.

Material and methods

Our study was divided in two parts:

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Part 1: Clinic and pathologic characteristics of vulvar cancer in Tunisia

We performed a retrospective multi-centric study including all cases of vulvar cancer diagnosed in three departments of Gynecology and Obstetrics (one in south Tunisia and two in the capital), during a 17-years period time (January 1998–December 2014).

All Primary Cases of vulvar cancer confirmed on a final pathology examination of a vulvar biopsy in the three departments were included.

Data were extracted from the medical records and included socio-demographics setting, clinical presentation, histology subtype, tumor size and stage of disease at diagnosis. Household income was calculated by dividing the annual household income by the square root of the number of persons in the household. Household incomes were ranked from lowest to highest and divided into three groups (high, middle, and low) using the SAS Rank function.

Stages were assigned according to the 2009 International Federation of Gynecology and Obstetrics (FIGO) staging system.

Kaplan-Meier method was used to calculate the survival rate.

Part 2: Incidence trend of invasive vulvar cancer in North Tunisia 1994–2009

Cancer registry of North of Tunisia

North Tunisia Cancer Registry (NTCR) was created in 1997. Population data (censuses 1994 and 2004) and estimates for other years were provided by the National Institute of Statistics (INS). The North Cancer registry covers a population of 4.436.000 inhabitants, representing 40% of the Tunisian population, and the rate of annual average population increase is estimated at 1.4%. The total area covered is 28,162 km^2. International Classification of Diseases for Oncology (ICD-O) was used for coding topography and morphology of cancers.

Patients

The data sources are public/private extended network in oncology academic hospitals, general hospitals and private clinics. Cases of vulvar cancer were defined with the ICD O3 code C51 or ICO 1 code 184.1 to 184.4. As data for 2010 year and over were still not available in Tunisia North Cancer Registry, trend analysis was limited to the period 1994–2009.

Statistical analysis

Standardized incidence was calculated each year on the basis of the World Standard Population (2000).

The estimated annual percent change (APC) represents the average percent increase or decrease in cancer rates per year over a specified period of time. It was calculated by performing a linear regression to the natural logarithm of the annual age-adjusted rates, using SEER Joinpoint regression software version 3.0 (http://srab.cancer.gov/joinpoint).

Results

Socio demographic characteristics

During the study period, 76 patients with vulvar cancer were identified. The mean age at diagnosis was 65.4 years (ranging from 32 to 85 years). Among these patients, 82.9% were more than 55 years old (63 cases). The highest proportion was observed for the age group 65–72 years. At the time of diagnosis, 86.8% of patients were postmenopausal women. Mean gestity was 8.4 (range:0–14) and mean parity was 6 (range:0–13). Twelve patients (15.8%) were nullipara and one patient was virgin (1.3%). None of our patients had a history of immune deficiency disease. Almost 2/3 of these patients were from a low socio-economic group (data available for 68 patients) and 23.7% of patients had a history of cigarette smoking.

Vulvar cancer was accounting for 4.6% of gynecological cancer during the study period in the three departments. It was ranked fourth among gynecological cancers after endometrial, ovarian and cervix cancer.

Clinical features

The mean time interval from the beginning of local symptoms to the histologic confirmation of vulvar cancer was 12.9 months ± 6.38 (ranging from 1 to 36 months). Vulvar pruritus was the most common symptom of vulvar cancer, followed by vulvar bleeding, dysuria and pain.

None of the patients had a family history of vulvar cancer. Twelve patients had preexisting dermatitis (Table 1).

The average size of the tumor was 3.96 cm ± 2.59 (ranging from 1 to 11 cm). Macroscopically, burgeoning tumors were the most common type (52.6%) and the lesion was raised in 90.7% of cases (Table 2).

The anterior part of the vulva was the most common localization of the tumor (78.9%). Fourteen patients had multifocal lesions, and almost 2/3 of patients had unilateral lesions.

According to the International Federation of Gynecology and Obstetrics (FIGO 2009), Stage III was the most frequent (53.8%), followed by stage II (28.2%) and Stage I (17.9%). None of the tumors was stage IV at diagnosis. Nineteen patients (25%) had a palpable lymph node. All our patients had a surgical management: 94.4% had a total vulvectomy and 5.6% had a partial vulvectomy. All patients had at least 4 lymph node removed with a mean of 16 lymph node removed (ranging from 6 to 44). Lymph nodes were positive in 15 cases (19.7%). Twenty-two patients had radiotherapy and 3 patients received chemotherapy.

Squamous cell carcinoma (SCC) was the most common histologic type (94.7%). There were also four cases of malignant melanoma.

The six months survival rate in our study was 75% (57/76) and was 58.3% (44/76) at 5 years.

The five-year relative survival rates for patients with vulvar melanomas seemed to increase from 37% (95% CI: 28–47%) during 1989–1999 to 45% (95% CI: 37–54%).

The overall survival rates at 12 months, 24 months, 36 months, 48 months and 60 months were respectively 81.0%, 71.7%, 63.9%,

Table 1
Dermatitis preexisting to vulvar cancer in Tunisia (1998–2014).

Preexisting dermatitis	% of patients (N = 76)
Lichen sclerosus	7.9
Vulvar vitiligo	3.95
Vulvar leukoplakia	1.3
Condyloma acuminatum	2.6
Total	15.8

Table 2
Macroscopic aspect of vulvar cancer in Tunisia (1998–2014).

Macroscopic aspect	% of patients (N = 76)
Burgeoning	52.6
Ulcerated burgeoned	38.1
Ulcerated	3.9
Ulcerated – infiltrated	2.6
Abscessed	2.6

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