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Research Article

Epidemiological, Clinical, Histological Profile and Management of Vulvar Cancers

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Abstract

Introduction: Vulvar cancers are among the least common cancers in our department with a number that has continued to grow over the years and a rejuvenation of the affected population. The objective of our study was to contribute to the improvement of vulvar cancers management by describing the epidemiological, clinical and histological profiles of patients with vulvar cancer**.**

Materials and Methods: This is an 11-years descriptive retrospective study from January 2009 to December 2019 involving a series of 33 patients treated in the gynecological-obstetrics department 2 of the Hassan II University Hospital in Fez.

Result: The average age of our patients was 63 years with extremes of 25 - 85 years. 27 women (81.8%) were postmenopausal and 25 (75.8%) were multiparous. Symptomatology was dominated by pruritus in 29 cases (88%) and vulvar swelling in 17 cases (51.5%). The most common clinical aspects were ulcero-budding forms in 21 patients (63.6%) followed by 8 budding forms (24%). There were 22 cases (66.7%) of multifocal involvement. The vulvar biopsy found 27 cases (82%) of squamous cell carcinomas. Surgery was performed on 28 patients (84.8%) including 22 total vulvectomies (78.6%). Radiotherapy was indicated exclusively or concomitantly with chemotherapy. The evolution was marked post-operative by the predominance of sutures release in 8 patients (30%) followed by 4 deep vein thrombosis of the lower limbs (14.2%) and 3 lymphedema (11%).

Conclusion: Invasive vulvar cancers are often of poor prognosis because their diagnosis is most often at a locally advanced stage. Management must take into account the clinical stage of the tumor, its histological type and the general condition of the patients in order to minimize the functional and psychological consequences of the surgery, which remains very mutilating.

Keywords: *Vulvar Cancer; Management; CHU HASSAN II; Fez; Morocco*

Introduction

Vulvar cancers are rare malignant neoplastic lesions, accounting for less than 5% of all gynecological cancers and 1% of cancers in women. They occur most often in postmenopausal and elderly women with an average age of 70 years [1]. However, globally, it is increasing, also reaching the young population due to the involvement of papilloma virus infection.

The most common histological type is squamous cell carcinoma in 90% of cases. Based on etiology, it can be classified into the first type that correlates with human papillomavirus (HPV) infection and the second type that is not associated with HPV. The diagnosis of [2] these cancers is most often made at an advanced stage without the possibility of resection in 30% of cases at the time of diagnosis [3].

Diagnostic wandering and ignorance of the initial symptomatology are factors that compromise the early management of vulvar cancers.

Thus, we conducted this study with the aim of contributing to the improvement of the management of vulvar cancers by describing the epidemiological, clinical and histological profiles of patients with vulvar cancer while assessing the evolution of patients after management.

Material and Method

Study design

This is a descriptive retrospective study of 10 years from January 2009 to December 2019.

The gynecological-obstetrics department 2 of the Hassan II University Hospital in Fez served as a framework for this study.

Population of study

It has involved 33 patients treated for histologically proven vulvar cancers.

Inclusion criteria

Were included in this study all the cases of vulvar cancers managed in our department during the study period.

Non-inclusion criteria

Were not included all the cases of vulvar cancers diagnosed during the study period but not managed in our department and all the cases of vulvar cancers with incomplete records.

Data collection

We collected information from the various patient files, from the first consultation to the therapeutic management and postoperative and/or post-radiation follow-up of the patients.

The archives of multidisciplinary consultation meeting sheets also allowed us to complete the information on post-operative therapeutic decisions.

The required information was then reported on a collect sheet.

This collect sheets contained the following data overall:

- Epidemiological data: Age, parity, and hormonal status.
- History includes all medical-surgical, gynecological-obstetric, toxic, carcinological history and pre-existing lesions.
- Clinical data: The time and reason for consultation as well as the data of the clinical examination and the classification of the tumor.
- Macroscopic and histological results of vulvar biopsies.
- Therapeutic data.

- Histological study of the operating tissues.
- Follow up data.

Statistical analysis

The data was entered into the Microsoft Excel 2016 software then exported and analyzed in the SPSS software version 25.

Ethical considerations

All patients who participated in the study gave their consent, and data were collected anonymously. Data confidentiality was ensured during data collection and processing.

Result

The average age of our patients was 63 years with extremes of 25 - 85 years. The majority of women were postmenopausal in 81.8% of cases and 75.8% were multiparous. The average consultation time was 18 months, and exceeded 6 months in 81.8% of cases. Comorbidities such as diabetes and high blood pressure were the most common with respective proportions of 27% each.

Signs of major calls were dominated by pruritus (88%) and vulvar swelling in and 51.5% of cases. The most found clinical aspects (Table 1) were represented by ulcero-budding forms with a rate of 63.6% followed by budding forms in 24% of cases. The main associated lesion was leukoplakia in 27.3% of cases. In our sample, these vulvar lesions were multifocal in the majority of cases (66.7%), and unifocal in 33.3% of cases. The preferred seat of these vulvar lesions was the combination of labia majora (right and left), labia minora and clitoris in 81.8%, with a predominance on the right. 3 lesions only on the right labia, 2 isolated lesions on the labia majora, and 1 strict clitoral involvement.

Clinical aspects	**N: 33**	**Percentage %**
Ulcerative budding	21	63,6
Budding	8	24
Ulcerative	3	9,1
Vulvar induration	1	3,3
Associated lesions	**N: 33**	**Percentage %**
Leukoplakia	9	27,3
Sclerous Lichen	6	18,2
Bowen's lesions	3	9,1
Unspecified associated lesions	15	45,4

Table 1: *Distribution by different clinical aspects.*

The vulvar biopsy performed in all our patients was in favor of squamous cell carcinoma in 82% of which 70% were well differentiated and 9% moderately differentiated. These results are shown in figure 1.

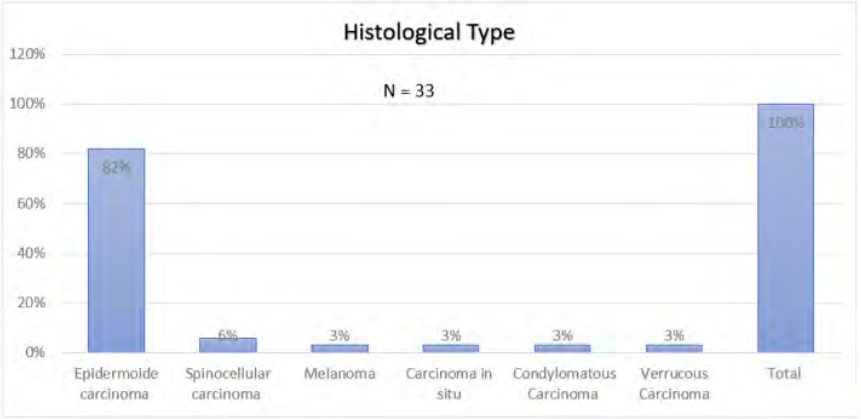

Figure 1: *Distribution by histological type.*

A thoraco-abdominopelvic CT scan was performed in most of our patients (91%), apart from 3 who received a pelvic MRI for the early stages. The CT scan revealed 4 cases of distant metastases (pulmonary, hepatic, bone and cerebral), two of which were discovered initially and the other two late. The CT scan also showed inguinal, iliac and femoral lymphadenopathy in 12 of our patients (36.4%). Tumours were classified according to FIGO 2018 (Table 2).

Classification FIGO 2018	N: 33	Percentage %
Stade I	13	39,4
Stage IA	3	9,1
Stage IB	10	30,3
Stade II	8	24,2
Stade III	8	24,2
Stade IIIA	2	6,1
Stage IIIB	6	18,2
Stage IIIC	0	0
Stade IV	4	12,1
Stage IVA	2	6,1
Stade IVB	2	6,1

Table 2: *Distribution according to the FIGO 2018 classification.*

Cystoscopy was performed on two patients whose bladder involvement was initially suspected. One of these 2 patients had an ulcero-necrotic lesion invading the labia minora, the clitoris, the ureter at the bottom and the vagina on a tumor classified IIIB1 with bilateral inguinal lymphadenopathy. Ureterocystoscopy showed infiltration of his urethra. Rectoscopy was performed in 07 patients (30.4%) who had extensive lesions up to the margin. This exploration had returned to normal in 5 patients and two (02) had infiltration.

Surgery was performed in 28 patients (84.8%) including 78.8% total vulvectomy and 6% anterior hemivulvectomy. Inguinal lymphadenectomy was superficial and deep bilateral in 92.8% of operated patients, or 78.8% of the entire sample. Among the patients who received inguinal lymphadenectomy, 78.6% were negative and therefore free of lymph node metastasis and 21.4% were lymph node metastasis.

Radiotherapy was indicated exclusively or concomitantly with chemotherapy. It was preoperative in 33.4% of cases, postoperative in 54.5% and exclusive in 18.2%. 2 patients received palliative treatment. First-line radiotherapy was indicated in 11 patients (33.4%) for advanced stages (1 stage IIIA, 6 stages IIIB, 4 stages IV (A and B). Radiotherapy alone was exclusively offered in 6 patients (18.2%). In adjuvant treatment, radiotherapy was done in 18 of our patients or 54.5% with a total dose of 46 Grays in 23 sessions and divided at a rate of 2 Grays per session according to a rate of 5 weekly sessions for 12 cases (36.3%), and a dose of 50 to 55 Grays for 6 cases (18.2%).

Chemotherapy was administered in 07 patients in total, including first-line concomitant radiotherapy in 5 patients (15.2%) and palliative in 02 patients (6.06%) who were in alteration of the general condition, one with pulmonary metastasis and the other with brain damage (Syndrome of metastatic origin) in the other. The protocol was that of platinum salts +/- 5FU-CDDP (5 Fluorouracil, C Cyclophosphamide, D: Docetaxel) associated with Paclitaxel on 6 to 8 courses with an interval of 21 days.

The post-operative evolution was marked by the predominance of sutures release in 30% of cases, followed by deep vein thrombosis of the lower limbs and lymphedema with proportions of 14.2% and 11% respectively. In post-irradiation, there was a case of complete vaginal vulva stenosis. The hindsight of our study varies between 12 months and 8 years. With a maximum survival of 8 years for a minority of cases, and a peak survival of 24.2% for a lifespan of 6 months and a half years.

Discussion

Vulvar cancers are among the least common cancers in our department with a number that has continued to grow over the years and a rejuvenation of the affected population. Postmenopausal women are the most affected category with a significant proportion of multiparous women. The average ages of vulvar cancer patients range from 60 to 65 years in studies [1,4,5] with extremes that vary from study to study. Once described as the prerogative of postmenopausal women, these cancers can occur in even younger subjects as it is the case in some series where women under 40 have been reported [4-6]. This occurrence in young women would be due to an increase in HPV infections worldwide on the one hand [7] and on the other hand to the lack of a strategy to prevent HPV infections but also the precocity of sexual intercourse in some women in our context.

From the clinical point of view, the most commonly described symptom of vulvar cancer is a long history of pruritus [4,5] and clinical examination most often finds a vulvar mass, which can be ulcerated, leukoplasic, fleshy or verrucous [4]. In our study, the majority of patients reported persistent pruritus with a clinical examination that found in most cases a budding ulcerative mass. This predominance of pruritus in the symptomatology could be a factor favoring the delay of diagnosis in these patients because it can be taken by uninformed health professionals such as persistent vulvo vaginitis. This is why it is important that healthcare professionals can have a certain approach to the diagnosis of suspected malignancies of the vulva whose procedure is based on a thorough history, followed by a clinical examination to accurately describe suspicious changes, their size, number, position, mobility, assessment of infiltration of deeper structures and safety margins in case of excision. A bimanual vaginal and rectal examination should always be performed to assess vaginal and rectal involvement [2].

Vulvar cancer is diagnosed in Africa and resource-limited countries often at an advanced stage of the disease. In our study, more than 60% of patients were at a stage greater than or equal to stage II of FIGO due to diagnostic wandering on the one hand and the long time that elapses between the appearance of the first symptom often neglected and the consultation for adequate management, on the other hand.

In our series, squamous cell carcinoma of the vulva was the most common histological type. This corroborates with data from the literature where squamous cell carcinoma of the vulva remains the most common histological type with a proportion ranging from 80% to more than 90% in some studies [3,7-10].

Treatment for vulvar cancer is primarily surgical, but radiotherapy and chemotherapy can be integrated into the management protocol [2,3]. This treatment depends mainly on histology and staging. However, other variables can influence management. In particular, age, coexistence of comorbidities and general condition of the patient [7,11].

This surgical management must be individualized and be as conservative as possible that will lead to the cure of the disease [12]. Most importantly, when treatment options are considered, the most appropriate treatments for: the primary lesion and lymph nodes in the groin, should be considered in isolation from each other, in order to maximize the chances of recovery, while minimizing treatment-related morbidity [13-15]. Surgical treatment ranges from radical total vulvectomy with bilateral inguinofemoral lymph node dissection to vulvar lumpectomy and sentinel lymph node [6,16].

For tumors smaller than 4 cm unifocal without clinical and radiological lymphadenopathy suspect the sentinel lymph node technique is the indication [6,17].

For tumors larger than four centimeters or multifocal bilateral inguinofemoral lymphadenectomy is recommended and for any stage greater than or equal to PT1C dissection is indicated. For tumors whose medial edge is more than one centimeter from the midline, the dissection is unilateral [4,6,15,16]. In our series, surgery was performed on 28 patients (84.8%) including 78.8% total vulvectomy and 6% anterior hemivulvectomy. Inguinal lymphadenectomy was superficial and deep bilateral in 92.8% of operated patients, or 78.8% of the entire sample. The high rate of total vulvectomy is related to the stage at which the diagnosis is made as well as the stage of management. This did not indicate a conservative treatment that could be optimal in the context of a complete resection with healthy margins. This very mutilating management was not without consequences because the postoperative evolution was marked by complications that prolonged the length of stay of patients and sometimes delayed the start of adjuvant therapy.

Radiotherapy can be used in neoadjuvant, adjuvant or palliative situations. In our study, radiotherapy was indicated exclusively or concomitantly with chemotherapy. It was neoadjuvant in 33.4% of cases, adjuvant in 54.5% of cases and exclusive in 18.2%. 2 patients (6%) received palliative treatment.

With regard to chemotherapy, with the exception of the neoadjuvant context, chemotherapy for vulvar carcinoma is palliative and often ineffective [2,4]. However, the most frequently used chemotherapy regimens are platinum-based including cisplatin, given alone or in combination with another agent, such as 5-Fluouracil, paclitaxel, vinorelbine or mitomycin C [2,4]. In our study the chemotherapy protocol used was based on platinum salts +/- 5FU-CDDP (5 Fluorouracil, C Cyclophosphamide, D: Docetaxel) combined with Paclitaxel over 6 to 8 courses with an interval of 21 days. It was for the majority of cases concomitant with radiotherapy.

Our study was limited by the small size of our sample and some patients were not included in the study because their folders were not complete on one side and the other side for the fact that some patients were not managed in our department after the diagnosis.

Conclusion

Vulvar cancers are rare gynecological cancers and are often of reserved prognosis because of early lymph node metastases and their diagnosis is most often done at a locally advanced stage due to misdiagnosis. It would be important to make the female population aware of the signs that should lead them to seek for rapid care and the nursing staff to establish the diagnosis early without wasting patients' time.

The management must be done in specialized centers and must be personalized considering the clinical stage of the tumor, its histological type and the general condition of the patients in order to minimize the functional and psychological consequences of the surgery, which remains very mutilating.

Early diagnosis could improve the functional and esthetic prognosis of patients by promoting less aggressive management.

Conflicts of Interest

There are no conflicts of interest between the different authors.

Authors' Contribution

All authors participated in the design and writing of this manuscript.

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