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Epidemic-Clinical, Radiological and Histopathological Characteristics as Well as the Therapeutic Modalities of 100 Cervical Cancers Collected within the Gynecology-Obstetrics II Department of the CHU HASSAN II in Fès (Morocco)

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Abstract **Original Research Article**

With more than 3,300 new cases and nearly 2,500 deaths each year, cervical cancer (CC) ranks second among female cancers in Moroccan women in terms of incidence and mortality. Our study aimed to describe the epidemiological, clinical and histopathological characteristics of patients with cervical cancer treated in the gynecology II department of the CHU HASSAN II de Fès.100 patients were included in our series: the most represented age group is that of 48-56 years old; 80% were married, 54% came from the city of Fez; no toxic habits have been found. The age of first reports was revealed in 10 patients with extremes between 18-25 years. Metrorrhagia (67%) constituted the main reason for consultation followed by leucorrhea in 23% and urinary signs in 10%. No cases of cervical cancer were diagnosed at stage 0 (in situ). Only 15% were diagnosed at stage I. Most patients, 76%, came to the hospital at stages II and 9% at stage III. Regarding the histological type, it is mainly represented by squamous cell carcinoma (87%), followed by adenocarcinoma in 9% and squamous cell carcinoma in 2%. The thoraco-obadomino-pelvic scanner was the standard given its accessibility; Stage IIB accounted for 35%, followed by stage IIIC1 in 23% of our series, the metastatic sites were essentially bone and lung. On the treatment side, only 3 of our patients benefited from a primary surgery consisting of an expanded total hysterectomy, rcc+ brachytherapy was administered to 86 patients, radiotherapy was exclusive in one patient and palliative chemotherapy was administered in 9 patients.12% of deaths are found and 13% of progression in our series.

Keywords: cervical cancer, Morocco, risk factors, diagnosis stage, mortality, radiotherapy, chemotherapy.

INTRODUCTION

Cervical cancer is a growing public health concern; it represents one of the major causes of cancer mortality among women worldwide. Prognosis and treatment are highly dependent on the initial stage of diagnosis. Worldwide, cervical cancer was the fourth most common cancer in women in 2018, with 569,847 new cases, or 6.6% of all new cancers diagnosed. Cervical cancer incidence and mortality rates are higher in low- and middle-income countries. This situation reflects serious inequalities that are explained by insufficient access to national services for vaccination against human papillomavirus (HPV), screening [1]

METHODOLOGY

This is a retrospective study conducted within the obstetric gynecology II department at the CHU HASSAN II DE FÈS.

The target population was patients with cervical cancer; Were included in our study women, of all ages, with cervical cancer confirmed by pathological examination, all stages combined. The data was collected via the multidisciplinary consultation meeting sheets, as well as the register dedicated to various cancers.

Were excluded from our study, the women who were lost to sight (a single consultation, inoperative file).

For each patient, the following parameters were studied included socio-demographic data (origin, age, marital status, occupation, parity, hormonal status, age at first sexual intercourse); the clinical and paraclinical data (reason for consultation, clinical stage at the clinical examination according to FIGO classification; the histological type, the radiological stage) as well as the therapeutic modalities and the evolution

RESULTS

A. Socio-demographic characteristics

The median age of patients in our series at diagnosis was 53 years with extremes ranging from 32 to 74 years. The most represented age range is that of 48-56 years with a frequency of 31 patients followed by the age range between 40-48 including 22 patients (figure 1).

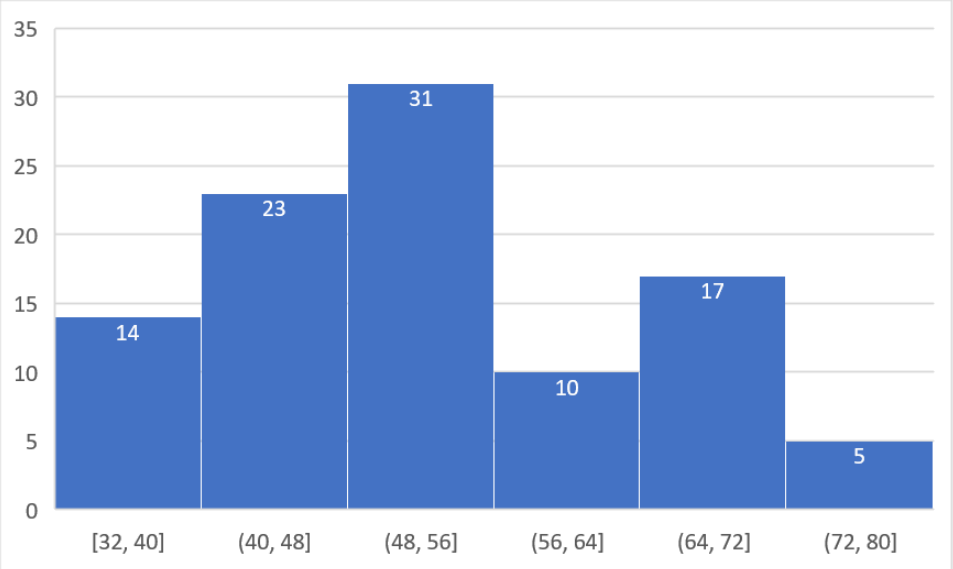

Figure 1: Representation by age group

only one of our patients came from outside (Guinea), all the rest of our patients are of Moroccan origin and resided in the Fès Meknes region with a percentage of 54% in the city of Fès (figure 2)

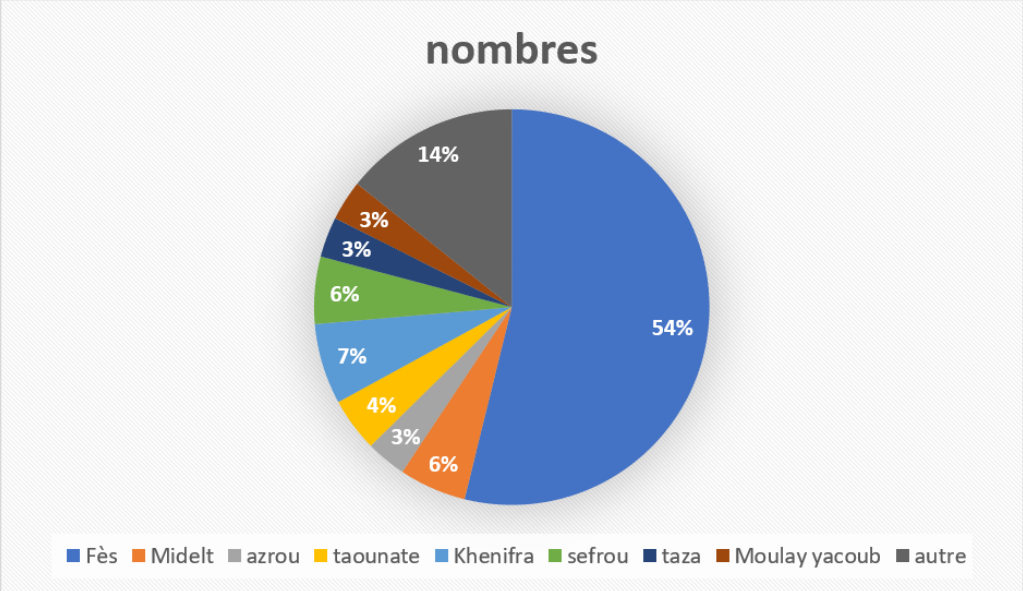

Figure 2: distributions by geographical area

86% of our patients benefited from AMO health coverage compared to 10% who were mutualists (CNOPS, CNSS) reflecting the low socio-economic level of the majority of our patients.

No toxic habits were found in our series; the age of the first sexual intercourse was only found in 20 files (20/100) and varied between 18-25 years.

The majority of our patients are married (80/100 or 80%) followed by 11 widows and 9 divorcees, the notion of sexual partners was only found in one patient, multiparity was found in 77% of cases with a mean parity of 4.

Regarding the reason for consultation, it was dominated mainly by metrorrhagia (67%) followed by leucorrhea in 23% and urinary signs in 10 patients (dysuria, low back pain, hematuria, acute urine retention)

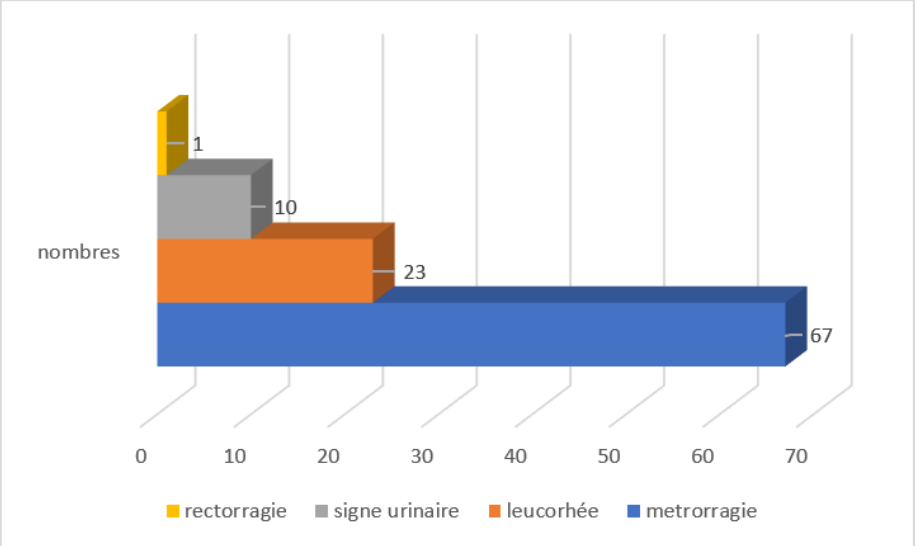

Figure 3: Reason for consultation

Some of our patients had mixed symptomatology including metrorrhagia associated with pathological leucorrhea

Figure 4 below –shows that no cases of cervical cancer were diagnosed at stage 0 (in situ). Only 15% were diagnosed at stage I; 76% at stages II and 9% at stage III which are very late stages.

Clinical stages	Frequency	Percentage
I	15	15%
II	76	76%
III	09	9%
IV	0	0
TOTALE	100	100%

Figure 4: clinical stages of cervical cancers

Regarding the histological type, it is mainly represented by squamous cell carcinoma (87%).

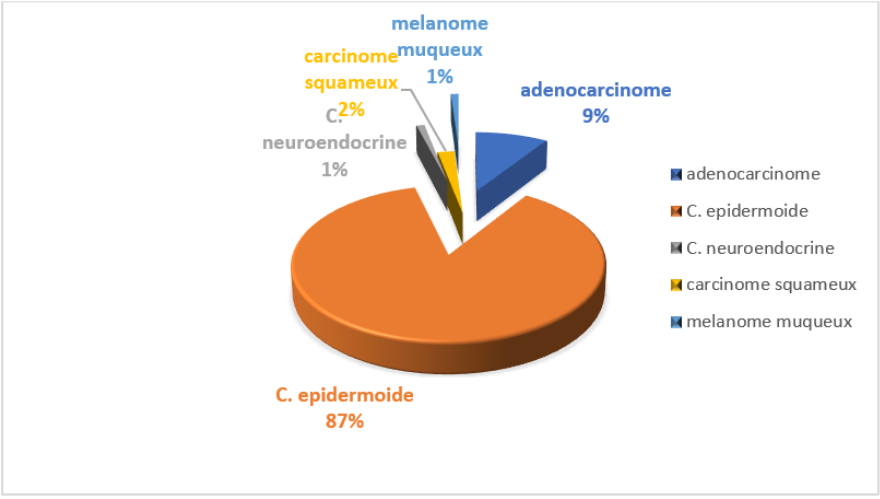

Figure 5: histological types

Imaging, in particular a thoraco-abdominopelvic scan, was performed on all our patients due to its accessibility and its lower cost and given that the majority of our patients were already at advanced stages, the pelvic and lumbo-aortic MRI was performed on only 10 patients.

Stage IIB accounted for 35%, followed by stage IIIC1 in 23% of our series, the metastatic sites were essentially bony and pulmonary.

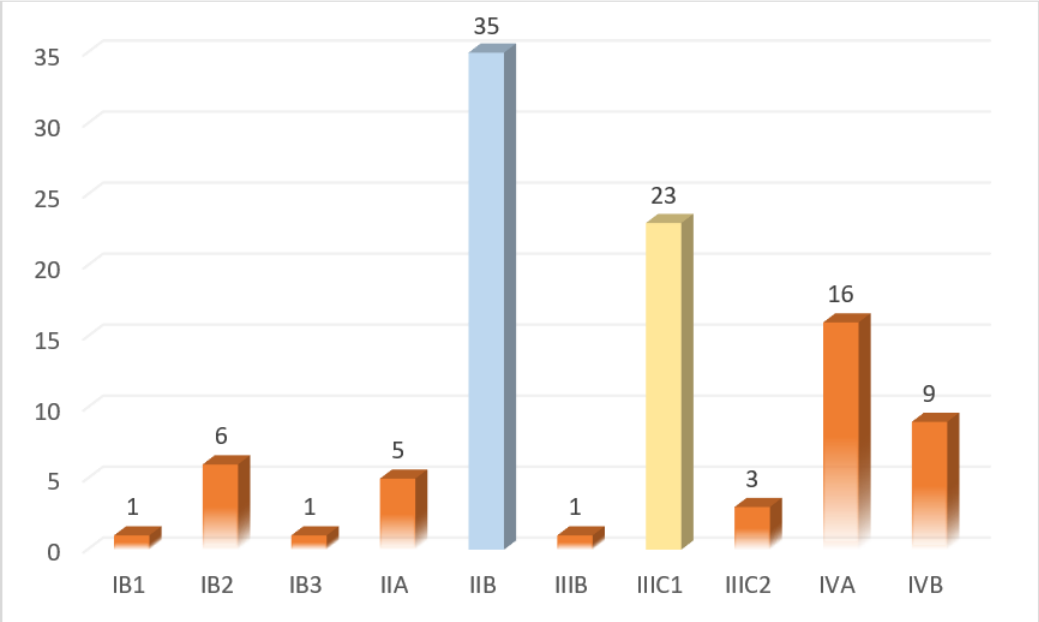

Figure 6: radiological FIGO stage

On the treatment side, only 3 of our patients benefited from a primary surgery consisting of an expanded total hysterectomy, rcc+ brachytherapy was administered to 86 patients, radiation therapy was exclusive in one patient and palliative chemotherapy was administered in 9 patients.

Regarding the evolution, 46 of our patients are currently under surveillance after a post-therapeutic pelvic MRI with no residue, 12 cases of death are found, which is 12% (patients diagnosed at a very advanced stage beyond IIIC1), a significant rate of loss of sight (25%), 13% case of progression (brain metastasis, bone, hepatic, costal peritoneal progression, lumboaortic adenopathy). The remaining 29% are awaiting post-therapeutic evaluation

DISCUSSION

Cervical cancer (CCU), a disease caused by papillomavirus (sexually transmitted infection) is the fourth most common cancer in women worldwide, with 660,000 new cases in 2022[1]. It is a disease that can now be prevented by vaccination, very easily detected by HPV tests or by smears, treat and often cure but in our context the majority of our patients are not aware of its prevention methods, hence the late establishment of a diagnosis. Cervical cancer particularly affects women living in regions with limited resources or from the most vulnerable socio-economic strata of society: it is estimated that 85% of new cases and 90% of deaths occur among this population.(Africa, Southeast Asia) [2]. According to the cancer registry of the Grand Casablanca region established in 2018-2021, cervical cancer ranks 4th among all cancers in women (6.5%), followed by colorectal cancer (7.7%), thyroid cancer (11.9%) and breast cancer first in 39.1% [3]

Regarding the incidence in the world, according to the globocan; this cancer occupied the 8th place in terms of incidence with 662,301 new cases with a majority of cases in Africa (19%) and Asia (60%) and the 9th place in terms of mortality with 348,874 cases [4]

In France, this cancer was responsible for 2,920 new cases and 1,117 deaths in 2018. Since the 1990s, there has been a decrease in incidence and mortality (on average 1.8% per year. This progress is due on the one hand to the use of vaccination against oncogenic genotypes of human papillomavirus (HPV), and on the other hand to the implementation of screening organized by cervical smear [2].

The age at diagnosis found in our population is similar to that of some studies, notably a study conducted in 2022 involving 50 studies carried out in Morocco in which the average age was 49+/-6 years[5].

Our results made it possible to describe the population of women affected by cervical cancer in the region and then confirmed the contribution of several

risk factors responsible for the prevalence of this infection, notably the low socio-economic level, multiparity.

Recall that in the literature several other risk factors have been identified, notably: smoking, multiple sexual partner (entity found only in one of our patients), history of a sexually transmitted infection, young age during first pregnancy; immunodeficiency (HIV) [6], [7].

Women who have given birth to a large number of children have a higher risk of developing cervical cancer. Pooled data from eight case-control studies on invasive cervical cancer and two in situ (cis) cancer studies from four continents appear to show that, compared to women who have never had children, those who have had three or four have 2,6 times more risk of contracting cervical cancer; those who had seven or more have 3.8 times more risk [8].

The physiological reason for this association is not clear; hormonal factors related to pregnancy or cervical trauma related to childbirth are possible explanations. Thus, we report in our series a high number of multiparous patients with cervical cancer. This proportion is 77% of cases, with an average parity close to 4.

Regarding diagnosis, the majority (87%) reached late stages (IIB and +), our results match those of the 2021 RCGC, stage II was the most represented stage (43.8%) followed by stage III (25%) then stage IV in 17% of cases[3]

The delay between the onset of symptoms and the consultation is long and exceeds months given the context of taboo, the level of education. The lack of an expanded screening campaign in certain areas means that cancer is discovered at an advanced stage.

An issue also exists; it is not that none of our patients had benefited from a screening despite the establishment of a screening system targeting women between 30-49 years old; this is due to several factors; those related to patients (the lack of awareness about cervical cancer and its screening methods, the ignorance of risk factors, embarrassment, the reluctance of some patients to be examined,) and those related to the health system (the lack of effective screening tools, the absence of screening centers accessible to all)

The standard diagnostic method for precancerous lesions and infra-clinical invasive cancer of the cervix involves performing a biopsy (directly if the lesion is visible or directed under colposcopy): histological diagnosis.

Squamous cell carcinoma is the most common histological type, accounting for 80% of cases while adenocarcinomas account for 15% of cases [9] In our series, squamous cell carcinomas accounted for 87%, while adenocarcinomas accounted for 9%.

The reference examination for the evaluation of cervical cancers is pelvic MRI due to high sensitivity to evaluate tumor volume and locoregional extension, with superior performance compared to clinical examination. An MRI scan must provide three fundamental information: tumor volume, parametric extension and lymph node involvement, essential factors for therapeutic management[10].

After a pre-therapeutic clinical and radiological assessment, the tumors are classified as follows: Early-stage cervical tumors (These are tumors from stage IA to IB2 according to the FIGO 2018 classification); Locally advanced tumours (tumours larger than 4 cm in greatest dimension and/or extending beyond the cervix)[10]

The treatment of cervical cancer is multidisciplinary and involves surgery, radiotherapy and chemotherapy, brachytherapy and mainly depends on the stage. Surgery is the first-line treatment in early-stage tumours, the combination of therapy and surgery is an option for stage IB2).

the standard treatment for locally advanced cervical cancer is concomitant chemoradiotherapy (Concomitant chemotherapy weekly with platinum salt) , brachytherapy completes the dose by providing additional focal irradiation to the residual disease and cervix[11].

After brachytherapy, systematic radical hysterectomy is not indicated; Only patients with a persistent residual tumor after brachytherapy (6 to 8 weeks assessment), confirmed histologically or through serial radiological follow-up, can benefit from salvage surgery, provided that there is no extra pelvic extension of the disease. However, the prognosis associated with local recurrence or persistence, even in isolation, is extremely bleak, and surgery is associated with the likelihood of major complications[12].

CONCLUSION

Cervical cancer is a real challenge for public health in Morocco. Considerable efforts are needed, the objective being to raise awareness among the population about the importance of primary prevention through vaccination, to raise awareness among women about the need for regular screening to avoid diagnosis at advanced stages which are a source of high mortality

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