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Epidemiological and clinical presentation of cervical cancer patients at the Yaoundé Gynaeco-Obstetric and Paediatric Hospital: a retrospective study

Profil épidémiologique et clinique des patientes atteintes d'un cancer du col de l'utérus à l'hôpital gynéco-obstétrique et pédiatrique de Yaoundé : une étude rétrospective

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Article original

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ABSTRACT

Introduction: Cervical cancer persists as a health burden, especially in developing nations despite being preventable. Our objective was to establish the epidemiologic profile and clinical presentation of patients with cervical cancer at the Yaounde Gynaeco-Obstetric and Paediatric Hospital.

Methods: We carried out a seven - year retrospective cross-sectional study from January 1, 2015 to December 31, 2021. We reviewed files of all patients treated for cancer at the Gynaecologic Unit of the Yaounde Gynaeco-Obstetric and Paediatric Hospital (YGOPH) and recruited all patients with a histopathology diagnosis of cervical cancer. A pretested data extraction sheet aimed at collecting information from the inpatient records was used as the study instrument. We collected sociodemographic data, the presenting symptoms and the histological type of cancer. The collected data were entered and analyzed using Statistical Package for the Social Sciences (SPSS) version 26.

Results: Cervical cancer was the most prevalent cancer (n=243, 65.1%) among all the gynaecologic cancers. The average age of the patients was 53(SD±10.9) years. The most represented age group was 50-59 years (35.2%). Most of these patients were housewives (33.7%). The mean parity of the patients was 5.6±2.3. Abnormal vaginal bleeding was the primary presenting symptom (85.6%), Most of the patients were diagnosed at Stage 3 of the disease (33.7%). Only 2.1% of the patients had undergone cervical cancer screening prior to diagnosis. Squamous cell carcinoma was the predominant histological type (86.3%).

Conclusion: These findings underscore the urgent need for improved cervical cancer prevention strategies, particularly for underserved populations.

RESUME

Introduction : L'objectif était d'établir le profil épidémiologique et clinique des patientes atteintes d'un cancer du col de l'utérus à l'Hôpital Gynéco-Obstétrique et Pédiatrique de Yaoundé (HGOPY).

Méthodes : Il s'agissait d'une étude transversale rétrospective sur sept ans, du 1er janvier 2015 au 31 décembre 2021. Etaient inclus les dossiers des patientes traitées pour un cancer au service de gynécologie de HGOPY et recruté les patientes ayant un diagnostic histopathologique de cancer du col de l'utérus. Nous avons recueilli des données sociodémographiques, les symptômes présentés et le type histologique du cancer. Les données étaient saisies et analysées à l'aide du logiciel Statistical Package for the Social Sciences (SPSS) version 26.

Résultats : Le cancer du col de l'utérus était le cancer le plus répandu (n=243, 65,1%) parmi tous les cancers gynécologiques. L'âge moyen des patientes était de 53 ±10,9 ans. Le groupe d'âge le plus représenté était de 50-59 ans (35,2%). La plupart de ces patientes étaient des femmes au foyer (33,7%) et la parité moyenne était de 5,6±2,3. Des saignements vaginaux étaient le principal symptôme (85,6 %). Les patientes étaient diagnostiquées au stade 3 de la maladie (33,7 %). Seules 2,1 % des patientes avaient subi un dépistage du cancer du col avant le diagnostic. Le carcinome épidermoïde était le type histologique prédominant (86,3 %).

Conclusion : Ces résultats soulignent le besoin urgent d'améliorer les stratégies de prévention du cancer du col de l'utérus, en particulier pour les couches défavorisées.

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Introduction

Cervical cancer is a malignant neoplasm arising mainly in the transformation zone of the cervix. Globally, it ranks as the fourth most common cancer worldwide following breast, colorectal, and lung cancer [1]. In sub-Saharan Africa (SSA), it is the second most prevalent cancer in women after breast cancer [2]. According to reports by the Federation of Obstetrics and Gynaecology (FIGO) in 2020, there were 604,000 new cases and 342,000 deaths worldwide caused by cervical cancer [3]. About 85% of all newly diagnosed cases, and 90% of deaths, occurred in Low and Middle Income Countries (LMIC) [3].

In Cameroon, cervical cancer is the most common gynaecologic cancer with an estimated 2,349 new cases diagnosed and 1,787 deaths recorded in 2020 [4]. Studies conducted in Yaounde and Douala, Cameroon, reveal cervical cancer's significant burden, representing 49.5% of gynaecologic and breast cancers in Yaounde and 72% among the gynaecological cancers in Douala [5,6].

Cervical cancer is now recognized as a rare long-term outcome of persistent infection of the lower genital tract by one of the high-risk Human Papilloma Virus (HPV) types. While screening and HPV vaccination programs have reduced the incidence and mortality rates in high income countries, the burden remains high in Cameroon and many other LMIC [7]. This gap is largely due to a difference in the quality of vaccination and screening programs, as well as various socioeconomic factors. Cervical cancer affects women at an important period in their live [8], particularly those low socioeconomic strata who lack awareness and access to screening methods [9,10].

Risk factors reported include, early initiation of sexual intercourse, history of multiple sex partners, history of sexually transmitted infection (STI), grand multiparity, smoking, poverty, low socioeconomic status and long term use of combined oral contraceptives (COC) [8,11]. Clinical features of cervical cancer include abnormal vaginal bleeding (inter-menstrual, post-coital, post-menopausal bleeding) in more than 50% of cases [12], offensive vaginal discharge in some 25%–79% of cases, and pelvic pain from nerve involvement on the pelvic side wall [13]. Physical findings at onset are usually subtle, but as the disease progresses, infiltration leads to cervical enlargement, irregularity and firm consistency of the cervix, eventually involving the adjacent parametrium [14].

The majority (75%–86%) of patients in LMIC present late in the disease course [12, 15, 16], due to the nonspecific symptoms and the absence of regular screening programs. Determinants of cervical cancer in this setting are poorly defined posing diagnostic challenges due to nonspecific signs and symptoms [17]. This study aimed to elucidate the epidemiologic profile, clinical presentations and histological types of cervical cancer at the Yaounde Gynaeco-Obstetric and Paediatric Hospital (YGOPH).

Materials and methods

This was a seven year (January 2015 to December 2021 inclusive) retrospective descriptive study of all cases of cervical cancer managed at the gynaecologic unit of the Yaounde Gynaeco-Obstetric and Paediatric Hospital. The YGOPH is a tertiary hospital in the Capital City of Cameroon established in 2002, specializes in gynaecologic and obstetric care, serving as a referral center for such cases in Cameroon. The hospital provides surgical management of cervical cancer by Gynaecologists specialized in cancer care. However, it lacks a radiotherapy unit and chemotherapy unit for comprehensive cancer management. The study spanned seven months from November 2021 to June 2022, encompassing cervical cancer cases diagnosed between 2015 and 2021.

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The study population included all patients who sought consultation at the hospital during the specified period and who had a histopathological diagnosis of cervical cancer. Patients with a confirmed histopathological diagnosis of cervical cancer were included, while those treated for cervical intraepithelial neoplasia were excluded. The sample size was calculated using Cochran's formula, resulting in a required minimum sample size of 183 cases. A consecutive sampling technique was employed, recruiting every eligible case meeting the inclusion criteria during the study period. Ethical clearance was obtained from the Ethical Committee of The University of Bamenda (Project Identification Number: 2022/0417H/UBa/IRB) and Administrative authorisation was obtained from the administration of the YGOPH. Files with a diagnosis of cervical cancer in the past 7 years were identified and data collection involved retrieving information from these files using a pretested self-designed data collection form. structured questionnaire.

Variables included socio-obstetric information (age, marital status, level of education, occupation, religion, ethnicity and residence), clinical profile (e.g. vaginal bleeding, discharge, pelvic pain), risk factors (age at first coitus, pregnancies, cervical cancer screening history, smoking, HIV infection, alcohol consumption and use of combined oral contraceptives), and histological details (e.g., tumour type, stage at presentation).

Data were entered into a computer and analyzed using Statistical Package for the Social Sciences (SPSS) version 26 software. Descriptive statistics, including proportions and percentages, were computed and presented using tables and figures. Ethical clearance was obtained from the Institutional Review Board, ensuring patient confidentiality and data security. Participant details were coded, and access to collected information was restricted to the principal investigator for research purposes only.

Results

From the registry of the gynaecologic unit of the YGOPH, we identified 373 cases gynaecological cancers, out of which 243 were cervical cancers cases giving a proportion of 65.1%. Among the 243 cases, only 209 files were retrieved and studied because some files were either missing or had incomplete data with respect to our study variables (190 files were used). Their ages ranged from 25 to 83 years, the modal age range was 50–59 years. The mean age was 53.0 (±10.9) years. Of all patients, 64 (33.7%) were housewives, followed by 39 (20.5%) farmers. Most, 121 (63.7%) were married. Most of the patients were from the Centre Region (n=79, 41.6%) followed by the West region (n=42, 22.1%) (See **Figure 1**).

The number of pregnancies ranged from 1 to 12 with majority haven had more than 6 pregnancies (n=68, 35.8%). (see **Table I**).

The most common presenting symptom was abnormal vaginal bleeding, documented in 85.6% (n=157. 85.6%) of the patients. This second most common symptom was offensive vaginal discharge (n=112, 58.9%) (see **Table II**).

Only 4(2.1%) of the participants had ever been screened for cervical cancer before with all having negative results at that time. Among the participants, 52 (27.4%) were persons living with HIV, 6(3.2%) had a history of cigarette smoking, 34 (17.9%) had a history of alcohol consumption, 16(8.4%) had used Combined Oral Contraceptives before and 4 (2.1%) had a family history of cervical cancer (see **Table III**).

The average number of cases diagnosed per year was 27. Of all the cases, 164 (86.3%) of the patients had squamous cell carcinoma, while 24 (12.6%) had adenocarcinoma. Most of the patients presented to the hospital at an advanced stage of the disease (n=94, 49.5%) (see **Table IV**).

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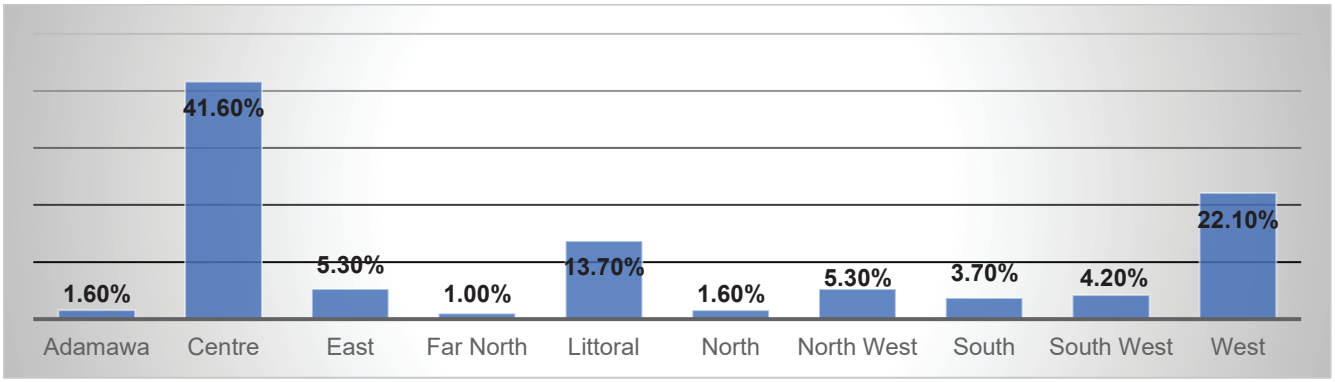

Figure 1: distribution of patients with respect to Region of Origin

Table I: socio-obstetric profile of the study population (N=190)

Variable	Frequency	
	N	Percentage (%)
Age (years)		
<30	2	1.1
30-39	15	7.9
40-49	51	26.8
50-59	67	35.3
60-69	40	21.1
≥70	15	7.9
Marital status		
Single	25	13.2
Married	121	63.7
Divorced	11	5.8
Widowed	33	17.3
Occupation		
Housewife	64	33.7
Farmer	39	20.5
Trader(petit traders)	28	14.7
Health worker	6	3.2
Teacher	19	10.0
Other(seamstress, police, retired)	34	17.9
Religion		
Christians	153	80.5
Muslims	37	19.5
Parity		
<3	18	9.5
3 – 4	47	24.7
5 – 6	57	30.0
>6	68	35.8

Table II: clinical presentation of patients with cervical cancer (N=190)

Signs and symptoms	Cases (N)	Percentage (%)
Abnormal vaginal Bleeding		
Yes	157	85.6
No	33	17.4
Per Vaginal Discharge		
Yes	112	58.9
No	78	41.1
Pelvic/abdominal pain		
Yes	40	21.1
No	150	78.9
Anemia		
Yes	35	18.4
No	155	81.6
Weight loss		
Yes	25	13.2
No	165	86.8
Urinary findings (Dysuria, Hydro- nephrosis)		
Yes	20	10.5
No	170	89.5
Dyspareunia		
Yes	8	4.7
No	181	95.3
Constipation		
Yes	14	7.4
No	176	92.6

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Table III: distribution according to the patients' risk factors

Risk Factors	Number (n)	Percentage (%)
History of cervical cancer screening		
Yes	4	2.1
No	186	97.9
Use of COC		
Yes	16	8.4
No	174	91.6
History of smoking		
Yes	6	3.2
No	184	96.8
Family history of cervical cancer		
Yes	4	2.1
No	186	97.9
Alcohol consumption		
Yes	34	17.9
No	156	82.1
HIV status		
Yes	52	27.4
No	115	60.5
Not known	23	12.1

HIV: Human Immunodeficiency Virus
COC : combined oral contraceptive

Table IV: characteristics of cervical cancer

Variables	Frequency (n)	Percentage (%)
Stage of disease		
Stage I	40	21.0
Stage II	56	29.5
Stage III	64	33.7
Stage IV	30	15.8
Histopathology type		
Squamous cell carcinoma,	164	86.3
Adenocarcinoma	24	12.6
Others (Adenosqua-mous carcinoma)	2	1.1
Number of cases per year		
2015	24	12.6
2016	25	13.2
2017	27	14.2
2018	33	17.4
2019	24	12.6
2020	27	14.2
2021	30	15.8

Discussion

In this study, cervical cancer was the most commonly diagnosed gynaecological cancer accounting for 65.1% of cases. This high proportion aligns with the findings of several authors who have studied gynecological cancers in Cameroon, ranking it as the most common gynaecological cancer [5,6]. Consistent with global trends, this high proportion underscores the significant burden of cervical cancer, particularly in low- and middle-income countries. The relatively stable number of cases observed annually suggests a persistently high incidence of cervical cancer in developing countries. While improvements in case identification may contribute to this trend, it also highlights potential shortcomings in preventive measures. The mean age of diagnosis (53±10.9 years) aligns with the findings of similar studies conducted in Cameroonian, indicating a similar pattern [5,18]. However, our findings are higher than those reported by in Bahrain (49.5 years) [19] The peak incidence between the ages of 50 and 59 is consistent with the natural history of cervical cancer progression, typically taking 10 - 20 years to advance to invasive stages. These results align with previous findings by Uzoigwe et al. in Nigeria [13] and Sharma et al. in India [20].

The majority of patients were married, predominantly housewives or farmers, reflecting the higher prevalence of cervical cancer among women

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in lower socioeconomic brackets. Additionally, a significant proportion had experienced six pregnancies, which correlates with increased HPV exposure and cervical cancer risk. The majority of cases presented to the hospital with abnormal vaginal bleeding, followed by abnormal vaginal discharge which aligns with previous studies [12, 13]. This indicates the importance of recognizing these signs for early detection and intervention. The low rate of prior screening (2%) as seen with others studies in Cameroon [21] and Nigeria [8], underscores the underutilization of available resources, emphasizing the critical role of screening in cervical cancer prevention. Studies have shown that screening a woman just once within the ages of 30 to 50 can reduce her lifetime risk of developing cervical cancer by as much as 26% [9].

A notable proportion of cases reported combined oral contraceptive (COC) use and alcohol consumption, both of which are associated with increased cervical cancer risk. COC could be a risk factor for developing cervical cancers especially if used for more than 5 years [22]. A possible mechanism to explain the association between the use of COCs and the risk of cervical cancer would be the possible interaction between estrogens, progestogens, and hormone receptors in cervical tissue, influencing the natural history of HPV infection. Alcohol consumption exposes these women to more sexual promiscuity, increasing their risk of acquiring HPV. Additionally, one-third of cases were HIV-positive, consistent with findings from other studies [23].

HIV-related immunosuppression heightens the risk of cervical cancer, underscoring the need for targeted interventions in HIV-positive populations. Squamous cell carcinoma constituted the majority of cases (86,3%) consistent with previous research. Sando *et al* in Yaounde reported 87.6% [5] and Hasiniatsy *et al.* in Madagascar reported 88.5% [24]. Higher proportions were reported by Elmajjaoui et al. in Morocco (94%) [25] and Sharma *et al* (94.1%) [20]. Variances in prevalence across studies may be attributed to differences in screening programs and early detection efforts. About half of these patients (49.5%)presented to the hospital at an advanced stage of the disease.

Limitations

This was a retrospective study with data collection from files making it difficult to assess other risk factors in our sample.

Conclusion

Cervical cancer predominantly affects those of low socio- economic status, and thus underscores the importance for routine screening in women of this demographic. Abnormal vaginal bleeding and abnormal vaginal discharge were the most common presenting symptoms. Squamous cell carcinoma was the most common histological type of cervical cancer.

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Authors' contributions:

DW, SD and MR were involved in the design of the study and drafted the protocol. DW, SD and MR analysed the data. All the authors drafted and finalized the manuscript for publication. All authors contributed to the writing of the paper and have approved the final version.

Competing interests

We the authors declare that we did not have any competing interests.

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