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Research Article

Cervical Cancer in the Health Zeguere Area, Kolondièba District, Sikasso Region, June 2024

Togola Abdou[1, *], Diakité Soungalo[2], Traoré Bouyagui[3], Diarra Aboudou[4], Koné Aminata[4], Sangho Oumar[5], Sidibé Toumani[3], Koné Yacouba[3], Togola Ousmane Boua[3], Togola Aboubacar[6], Barry Djibril[7], Ballayira Yaya[8], Doucouré Boubakar[9], Traoré Dramane[2], Traoré Beno ît[2], Koné Abdoulaye[2], Keita Hanine[10], Sidibé Youssouf[11], Dembélé Yacouba[12], Coulibaly Cheick Abou[5], Bah Oumar[13]

[1]Fakola Community Health Center, Ministry of Health, Kolondièba, Mali

[2]Regional Health Directorate, Ministry of Health, Sikasso, Mali

[3]General Directorate of Health and Public Hygiene, Ministry of Health, Bamako, Mali

[4]Zeguere Community Health Center, Ministry of Health, Kolondièba, Mali

[5]Department of Teaching and Research in Biological and Medical Sciences and Research in Public Health and Specialties, Ministry of Higher Education, Bamako, Mali

[6]National Agency for the Evaluation and Accreditation of Health Establishments, Ministry of Health, Bamako, Mali

[7]Epidemiology Training Program and Field Laboratory, Joseph Ki Zerbo University, Wagadougou, Burkina Faso

[8]Immunizations, African Field Epidemiology Network, Kampala, Ouganda

[9]National Malaria Control Program, Ministry of Health, Bamako, Mali

[10]African Field Epidemiology Network/WHO, Bamako, Mali

[11]Reference Health Center, Ministry of Health, Koutiala, Mali

[12]Reference Health Center, Ministry of Health, Kadiolo, Mali

[13]Reference Health Center, Ministry of Health, Kéniéba, Mali

Abstract

Introduction: Cervical cancer is a new tissue formation due to excessive, abnormal, anarchic and autonomous cell proliferation that develops at the expense of the uterine cervix. In sub-Saharan Africa, with more than 75,000 new cases and nearly 50,000 deaths per year; The Kolondièba health district regularly records suspected cases of cervical cancer, 473 women screened 68 were positive including 3 suspected cases of cervical cancer in 2022. Finally the health area in 2024, 3 positive cases out of 16 women screened June 9, 2024; during the 23rd week of the year 2024, the CSCom recorded 3 positive cases of cervical cancer, following this an investigation was considered by the management team to determine the frequency and risk factors of the disease. *Method*: We conducted a cross-sectional, analytical descriptive study from June 5 to 15, 2024, examined medical records and carried out an active search for partners in the community in order to identify and refer them to an early screening center. *Result*: This is a cervical cancer screening campaign, of which 18.75% of women screened were positive with IVA / IVL test,

*Corresponding author: togola.abdou@yahoo.com (Togola Abdou)

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37% of women screened had the STI, 56% had their first sexual intercourse between the ages of 12 and 14. The literature review and active research allowed us to raise awareness among partners about risk factors. The cases were referred to a care center. *Conclusion*: The investigation allowed us to be sure that sexual partners and negative cases were sensitized and educated on the risk factors of cervical cancer.

Keywords

Screening, Cervical Cancer, Uterine and CSCom Zeguer éJune 2024

1. Introduction

Cervical cancer is a new tissue formation due to excessive, abnormal, anarchic and autonomous cellular proliferation that develops at the expense of the uterine cervix. [1]

Cervical cancer is in 80-90% of cases a squamous cell carcinoma (which has developed from the squamous epithelium of the cervix) and in 10-20% of cases an adenocarcinoma (which has developed from the columnar epithelium of the endocervix). [1] According to Mr. B SAMAKE 2022-2023, in developing countries like ours, almost half of cervical cancers are not diagnosed or are already incurable at the time of their diagnosis. However, the cervix, due to its anatomical position, is an organ that is easily accessible for exploration and treatment. The best attitude to the scourge is to organize the screening campaign which constitutes secondary prevention but in Mali this prevention is tertiary. [1]

For M. Ly, et al, in the African context, the urgency is the implementation of a prevention policy. The etiology of cancers in Africa is mainly infectious: related to viral infections (hepatitis B virus, hepatitis C virus, Epstein-Barr virus, human papilloma virus, human immunodeficiency virus, Kaposi's sarcoma virus, leukemogenic viruses), bacterial (Helicobacter pylori) and parasitic (schistosome, Plasmodium falciparum). [2]

Other factors such as exposure to smoking and environmental pollution increase the risk of cancer. Other risk factors are lifestyle changes, reduced physical activity, unbalanced diet and tobacco. Today, tobacco kills nearly 5 million people worldwide every year. [2]

In a state doctoral thesis by Mr Amadou Kodio on the prevalence of papillomavirus infection and precancerous lesions of the cervix in Sikasso, a multicenter study in five countries (Guinea, Mali, Burkina Faso, Congo and Niger), initiated in 2004 by the IARC, demonstrated the effectiveness of visual inspection of the cervix after application of 3-5% acetic acid (IVA) and Lugol's acid (IVL) in the detection of precancerous lesions. [3]

Mali has thus adopted this method of screening by IVA and IVL. In the city of Bamako no less than 200,000 women have been screened and treated thanks to the "weekend 70" initiative which organizes free screenings every Friday and Saturday in different health centers in the capital. [3]

A study conducted on cervical cancer screening coverage in France, 2012-2017*, shows that 17.8 million women aged 25 to 65 over the period 2015-2017, 10,422,916 had at least one FCU during the period 2015-2017, i.e. a standardized national coverage rate for three-yearly CCU screening of 58.7%. [4]

Epidemiological surveys had shown several decades ago that women at risk are characterized by an early sexual life, with multiple partners. [5]

Globally 2020 source doctoral thesis of Mr. B SAMAKE2022-2023, approximately 604,000 new cases including 342,000 deaths, approximately 90% occur in low- and middle-income countries. In sub-Saharan Africa, with more than 75,000 new cases and nearly 50,000 deaths per year. [1]

According to recent data from the Mali cancer registry, cervical cancer comes second among female cancers, with a frequency of 22.80%. [1]

District source Doctor SR and DHIS2, during the cervical cancer screening campaign in 2022, out of 473 women screened, 68 were positive, including 3 suspected cases of cervical cancer. Finally, in the health area, in 2024 with the same IVA/IVL test, out of 16 women screened, 3 were positive.

In 2019-2020 according to a multicenter longitudinal study with retrospective collection of the state doctoral thesis of Mr. A Diallo, conducted from January 1, 2010 to September 30, 2017, or 07 years and 9 months in the Regional Hospital, CSR éf and CERKES, 8090 women, 8050 screened with the IVA/IVL 331 test were positive with 44 suspicions of cancer. [6]

Despite the efforts made by the state and its partners in the fight against cancer, especially cervical cancer, namely the creation of cancer care centers, training of staff on screening and treatment, mass screening, gratitude for screening, education and awareness messages, cervical cancer remains a public health problem in our country. Hence the purpose of this study.

2. Goals

2.1. General Objective

Determine the frequency of cervical cancer in maternity during screening in June 2024.

2.2. Specific Objective

1. Screen all women who come for cervical cancer screening,
2. Confirm cervical cancer cases in maternity,
3. Raise awareness of positive cases,
4. Refer positive cases to a care center.

3. Method and Materials

3.1. Study Framework

The study took place in the maternity ward of the CSCom of Zeguere, Kolondiéba health district, Sikasso health region. The health area is located 105 km from Kolondiéba and its updated population of 2024 is 12,903 inhabitants. In terms of human resources, the CSCom has 1 health technician, an obstetrician, one (1) EPI agent, one (1) drug sales depot manager, 24 relays and 6 ASCs, one (1) maternity ward. It borders to the North East by the village of Debété in RCI, North by the health area of Fakola, Bougouni health district, to the West by the health area of Farako and Bougoula.

3.2. Type of Study

We conducted a descriptive, analytical cross-sectional study in the maternity ward of the CSCom of Zeguere.

3.3. Study Period

The study took place from June 5 to 15, 2024 in the maternity ward of the CSCom of Zeguere.

3.4. Study Population

All women who came for screening at the maternity ward of the CSCom in Zeguere.

3.4.1. Inclusion and Non-inclusion Criteria

(a). Inclusion criteria:

All the women who came for screening and who agreed to be screened, the women whose files were well-filled and usable.

(b). Non-inclusion criteria

All the women who did not agree to be screened and the files that were not usable.

3.4.2. Sampling

We carried out an exhaustive sampling.

3.5. About the Tests

3.5.1. Positive IVA Test

Weakly positive:

When defined, bright white or cloudy lesions are observed with vague margins. [7]

Lesions closer to the JPC in the ZR and located not far from the external cervical orifice. [7]

Strongly positive:

When acidophilic areas are observed, with clear, distinct, well-defined, dense (opaque white, or dull white, or oyster white) contours, with or without raised margins, closer to the squamocolumnar junction line (SCJ) in the remodeling zone (ZR) and located not far from the external cervical os. [7]

Invasive cancer:

Presence of ulcero-proliferative growth bleeding on contact. [7]

3.5.2. Negative IVL Test

The following results are negative:

In a normal cervix, only the columnar epithelium of the central endocervical region does not stain and remains yellowish white (pale), with uniform margins; all other exocervical areas are cashew brown in color. [7] In nulliparous women, this corresponds to the area of the external os that has the appearance of a pinhole, whereas in women who have already given birth, this corresponds to the area of the external os that is transversely enlarged. [7]

3.6. Study Variables

The following variables were used: STI, date of first sexual intercourse, age, education level, positive test, residence and occupation.

3.7. Technique and Data Collection

1. Documentary review;
2. Extraction of data from information collection sheets;
3. Interview;
4. Inspection by application of 5% acetic acid and Lugol's solution to the uterine cervix.

3.7.1. Data Entry and Management

We entered the data and analyzed it using Epiinfo 7.2.5 software.

3.7.2. Descriptive Data Analysis

We made a description of the data in time, place and person and we also calculated the frequency, mean age and standard deviation.

4. Ethical Considerations

The study was conducted under the approval of the district; each patient will have an identifier that will not be directly linked to their name, so the work will be done in a context of anonymity and confidentiality.

5. Results

During our screening on 16 women screened, 3 positive cases, or 18.75%, were notified with the IVA/IVL test during our period.

Table 1. Distribution of women screened according to STI cases.

Disease	Number	Proportion (%)
IST	6	37.5
Without STI	10	62.5
Total	16	100

In this table we see that 37% of women screened had a sexually transmitted infection.

Table 2. Distribution of women screened according to age of first sexual intercourse.

Age group	Number	Proportion (%)
12 to 14 years old	9	56.25
15 to 17 years old	2	12.5
18 to 20 years old	4	25
21 to 25 years old	1	6.25
Total	16	100

We note here that the age group of 21 to 25 years is the most represented with 56% of women screened.

Table 3. Comparison of women screened according to positive cases.

Test	Number	Proportion (%)
IVA/IVL test positive	3	18.75
IVA/IVL test negative	13	81.25
Total	16	100

In this table, 18.75% of women screened with IVA/IVO tests are positive.

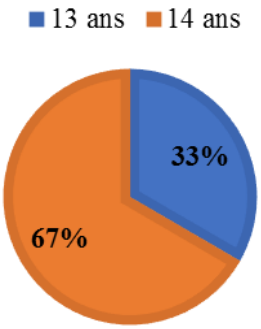

Figure 1. Distribution of women who tested positive according to the age of first sexual intercourse.

This figure shows us that 67% of women who tested positive had their first sexual intercourse at the age of 14 and 33% of positive women at the age of 13. This means that the age of first sexual intercourse is one of the contributing factors for cervical cancer.

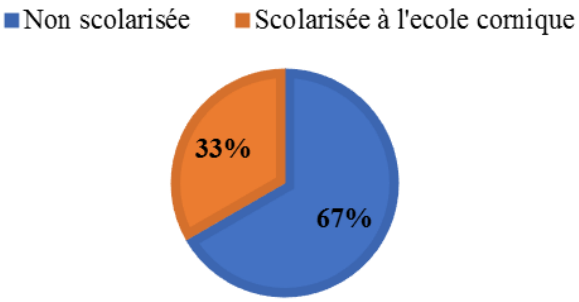

Figure 2. Distribution of women who tested positive according to level of education.

We note that 67% of women were educated in a Koranic school.

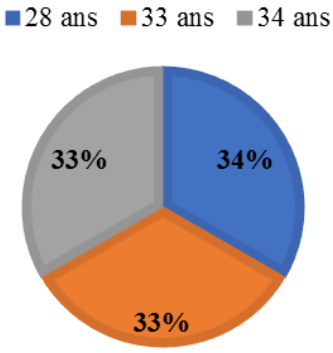

Figure 3. Distribution of women who tested positive by age.

The mean age was 31.66 years and standard deviation was 2.44.

6. Discussion

In our screening, 37% of the women screened had the STI, 56% had their first sexual intercourse between the ages of 12 and 14, 3/16 or 18.75% of the women screened were positive for the IVA/IVL test, 67% were 14 years old, 67% of the positive women were not in school, the average age was 31 years and the incidence by age group was 28 to 34 years.

A descriptive and analytical cross-sectional study with a retrospective and prospective component from January 1, 2020 to December 31, 2021, of a state doctoral thesis conducted at the CV reference health center in the Bamako Mali district, out of 2103 screened 161 (7.6%) were positive for the IVA / IVL test, the average age was 37.71, the primary level was the most represented with 32%. M. B Samaké (2022-2023). [1] This result is below ours in terms of percentage, we had 3/16 or 18.75% of the women screened were positive for the IVA / IVL test and the average age is above our result because our study found that the average age was 31 years.

By Mr. Aboubacar KEITA, in his state doctoral thesis, says that of all cancers treated in the radiotherapy department, gyneco-mammary cancers represent 60%, including cervical cancer which alone occupies 50%. [8] Our study was retrospective and consisted of collecting data on women received in the radiotherapy department suffering from cervical cancer from 2014 to 2016. We recorded 650 women with an average age of 52 years, who came mainly from university hospitals. [8] This result is not similar to that of ours, because our study focused on cases of cervical cancer.

In a study conducted on Cervical Cancer in HIV-Positive Women at the Gabriel Toure University Hospital in Bamako: Prevalence and Assessment of Knowledge Level in the original article by Fané S et al, the mean age was 41.62 years with extremes of 24 years and 70 years. [9] During the study period, we carried out the screening test by visual inspection after application of acetic acid (IVA) and or visual inspection after application of Lugol (IVL) in 216 HIV-positive patients. The IVA/IVL test was positive in 16 patients, or 7.4% (16/216). Approximately 81.3% of women tested positive in IVA and/or IVL were not in school; 12.5% had a primary level of education; 6.3% had a secondary level of education against respectively 65%; 23.5%; 6.5%; 1.5% and 3.5% of those leaving the madrasah among the patients tested negative in IVA and or IVL. [9] This result is below ours in terms of percentage, we obtained 1 8.75%, concerning schooling it is similar because in our study, 67% of positive women were not in school, and the average age was 31 years.

In an original article published by MALI SANTE PUBLIQUE 2019, entitled Genotyping of Human Papilloma Viruses (HPV) in precancerous and cancerous lesions of the cervix in Bamako (Mali) by Konaté et al, only 43.2% (83/192) had a positive result. Genotyping revealed the presence of 13 HR-HPV genotypes, the most frequent were HPV18 (16.3%), HPV45 (16.3%). The frequencies of single and multiple infections were 77.1 and 22.9%, respectively. [10] The majority of women with a positive HPV were multiparous with 30.9%. [10] The most represented histological type was moderate intraepithelial neoplasia (CIN2) with 42.2%. [10] This result is not similar to our study because we did not do genotyping.

In the original article from Mali Médicale on cervical cancer: epidemiological aspects and management in African settings cervical cancer: Epistemology and medical assistance in African. [11] Society patients who had early sexual intercourse were in the majority with 77.2% against 22.8% for those who had late sexual intercourse; 73.7% of patients had more than two partners and 70.2% had a history of sexually transmitted infections against 29.8%; 63.2% consumed alcohol; 36.8% were on oral contraceptives. [11]

This result is similar to that of our study in which 100% of cases had early sexual intercourse. In an article published on Public Health France on cervical cancer in France: trends in incidence and mortality until 2018, indicates that 40% of cases were diagnosed in women under 50 years of age, the median age at diagnosis was 53 years and the highest incidence was observed in women aged 45 to 49 years (18.0 per 100,000 PA). [12] However, this result is not ours, because in our study the average age was 31 years and the incidence was observed in the age groups of 28 to 34 years.

In the article published on the analysis of cervical cancer screening activities in a region of western Algeria between 2007 and 2011: shows us that the age of women at first sexual intercourse (or first marriage) was between 13 and 46 years, it is early at 33% (less than 20 years). Parity varies from 0 to 11, where the notion of multiparity is predominant, 52% of women having more than three births with an average parity of 5.5. Oral contraception is the most used with a rate of 34%. [13]

This result is not similar to that of our accepted age if we refer to the 13 years. In our study we obtained, 37% of the women screened had the STI, 56% had their first sexual intercourse between 12 and 14 years, 3/16 or 18.75% of the women screened were positive for the IVA/IVL test, 67% were 14 years old, 67% of the positive women were not in school, the average age was 31 years and the incidence by age group was 28 to 34 years.

In a doctoral thesis on a pilot study of cervical cancer screening in a rural Cameroonian region, he emphasizes that among the population studied, 50% showed signs of infections on the two cytological preparations. The prevalent cervical infection is Gardnerella infection (22.3%). The others are attributable to Candida (3.7%), Trichomonas (2.4%) and Actinomyces (0.28%). 50% of patients who had a histological examination also showed signs of severe cervicitis. [14] This result is similar to ours because despite the fact that we did not do assessments, 100% of our cases had a sexually transmitted infection.

In EPI-CLIN 2015 / Journal of Epidemiology and Public Health 63S (2015) S61–S89, 191 cases of cervical cancer were collected in the city of Rabat between 2005 and 2008.

[15] All cancer cases were histologically confirmed. One hundred and fifty cases (93.8%) were discovered following symptoms. [15] The mean age was 55.2 ± 12.4 years, 130 patients (69.1%) were aged 35 to 64 years. Squamous cell carcinoma was found in 164 patients (85.9%). This result is not similar to ours, all our cases were confirmed by the IVA/IVL test and our mean age was 31 years.

In a dissertation on cervical cancer, it is emphasized that the risk factors for cervical cancer are: sexually transmitted infections (STIs), early sexual activity, smoking, multiparity, weakened immune system, endogenous factors, diethylstilbestrol, age, socioeconomic status. [16] This result is not entirely similar to ours, however we found a link with sexually transmitted infections.

In an article on Transition from cytology to HPV detection for cervical cancer screening in Canada, shows that HPV DNA PCR testing is more sensitive than cytology screening (94.6% vs. 55.4%), but it is less specific (94.1% vs. 96.8%). [17] This means that a greater proportion of patients with healthy cervixes are likely to receive a positive result. [17] However we cannot provide a perspective on this as we are working with the IVA/IVL test.

Analysis of the results of cervical cancer screening campaigns in Conakry, Guinea, carried out using the IVA/IVL test, the analysis of the results shows a strong involvement of the 25–39 age group with proportions increasing from 32.7% in 2012 (Table 1) to 55% in 2013 (Table 2). [18] This finding proves the mobilization of this category of women as well as the acceptance of screening programs and the management of precancerous and cancerous lesions of the cervix. This result is similar to that of our study, it was the 25 to 34 age group.

In the state doctoral thesis of Mrs. Alimatou FANE, on the correlation between histological diagnosis and the result of cervical cancer screening by visual methods IVA / IVL in the district of Bamako out of 1375 IVA / IVL tests were positive in 1361 patients or 99%. [7] In 14 cases or 1% there was a suspicion of cancer while, in the biopsies carried out we found 1146 results among which cervicitis associated with HP V were the most frequent histological types with a total of 556 cases out of 1146, or a rate of 40.4%. [7] Monitoring of low-grade lesions with 18.2% of cases. [7] This shows the effectiveness of the two tests especially the IVA/IV L tests, unlike ours, we did not make a correlation but we worked with the work of the IVA/IV L tests of which 3/16 or 18.75% were positive.

For the state doctoral thesis of MONSIEUR SEBA KONATE, on screening for cervical cancer at the reference health center of commune V of the district of Bamako regarding 113 cases, out of 113 women including the IVA test 56 were positive or 45% while 106 positive or 93.8% for the IVL test. [19] By account in our the 100% were positive on both tests.

In the state doctoral thesis of Mr. KAMISSOKO Mady Joseph which focused on cervical cancer in Bamako: about a follow-up of 37 cases, we emphasize that in his study, the most represented age group was that of 45-60 years with 40.5% of cases and the average age was 50.92 15.78 years with extremes of 23 years and 85 years. [20] This result is not similar to that of our study, the average age was 31 years and the incidence by age group was 28 to 34 years.

In the article by H. Sardain, on curative pelvic exenteration in case of recurrence of cervical cancer in the era of concomitant radio-chemotherapy: review of the literature, a review of the literature dating from 2002 showed that the sensitivities and specificities concerning bladder or rectal involvement are 71—75% and 91% respectively with MRI, compared favorably to 45—64% and 73% with CT. [21] The analysis of the parameters also showed a superiority of MRI compared to CT (74% vs 55%). [21] In our study we did not perform a sensitivity or specificity test.

A study carried out on the role of the sentinel lymph node in cervical cancer in 2009 by R. Lousquy, shows us that the rates of pelvic lymph node invasion vary from 0 to 4.8% at stage IA, 0 to 17% at stage IB, 12 to 27% at stage IIA and 25 to 39% at stage IIB. [22] However, we do not have a study on the role of the sentinel lymph node in cervical cancer.

A study on the New International Federation of Gynecology and Obstetrics (FIGO) Cervical Cancer Classification and Management Recommendation, a review of 22 articles evaluating the safety and impact of pretherapeutic surgical staging of para-aortic lymph nodes before treatment found that 18% (range 8% to 42%) of patients with stage IB-IVA cervical cancer had lymph node involvement. In another study, up to 35% of clinically assessed stage IIB tumors and 20% of stage III tumors were associated with para-aortic lymph node metastases. [23] However, we have not made a classification of the cases.

Place of coelioscopy in the surgical treatment of cervical, endometrial and ovarian cancers in France: results of a national practice survey, highlights that the percentage of patients initially treated by coelioscopy was on average 51.1% (35.5% to 74.1%) with no significant difference between centers ($p = 0.04$). [24] The rate of patients treated by coelioscopy in France during the year 2005 was 51.1%, 43% (610 interventions) in university hospitals and 57% (787 interventions) in CAC. [24]

7. Conclusion

Screening allowed us to detect 16 women, 3 of whom were positive, and these positive cases were made aware, educated, and referred to a specialized treatment center. Negative cases were made aware of the risk factors for cervical cancer**.** Although we did not provide therapeutic care, we note that laparoscopy is frequently used in the management of cervical cancer.

Abbreviations

ADK	Adenocarcinoma

DNA	Deoxyribonucleic acid AGUS: Atypical Glandular Cells of Undetermined Significance
ATCD	Antecedent
ASCUS	A Typical Squamous Cells of Undetermined Significance
CE	Squamous Cell Carcinoma
CD4	Cluster of Differentiation 4
CHU	University Hospital Center
CI	Invasive Cancer
CIN/NCI	Cervical Intraepithelial Neoplasia
CIS	Carcinoma in Situ
CNTS	National Center for T
CIN	Cervical Intraepithelial Neoplasia
IARC	International Agency for Research on Cancer
CO	Oral Contraceptives
CSCom	Community Health Center
CSRéf	Reference Health Center
HPV	Human Papilloma Virus
MSM	Men Who Have Sex with Men
IVA	Visual Inspection with Acetic Acid
IVL	Visual Inspection with Lugol
JPC	Pavimento-cylindrical Junction

Conflicts of Interest

The authors declare no conflicts of interest.

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