ORIGINAL RESEARCH ARTICLE

Cervical cancer screening in former sex workers in ex-localization area

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Abstract

Despite the lack of commercial sex activities as the localization has been shut down since 2014, former commercial sex workers (CSW) could be at risk for cervical cancer. Therefore, this study aimed to determine the prevalence of cervical cancer using early detection with Papanicolaou (Pap) smears in former CSW in this ex-localization area. This study was conducted with purposive sampling intended to be limited to former CSW and women who still live around this ex-localization area as a control group. This study included 76 women, 52.6% of whom were former CSW. Pap smear results showed no pre-cancerous lesions of the cervix in any of the participants. Comparisons between the CSW and control groups showed no differences in Pap smear results. Infection findings were found in 36.1% of CSW group. Early detection of human papillomavirus (HPV) DNA is necessary for identifying risk factors for cervical cancer in these populations. *(Afr J Reprod Health 2023; 27 [2]: 45-48).*

Keywords: Cervical cancer; early detection; pap smear; public health; women health

Résumé

Malgré le manque d'activités sexuelles commerciales, la localisation étant fermée depuis 2014, les anciennes travailleuses du sexe (TS) pourraient être à risque de cancer du col de l'utérus. Par conséquent, cette étude visait à déterminer la prévalence du cancer du col de l'utérus en utilisant la détection précoce avec des frottis de Papanicolaou (Pap) chez les anciens CSW dans cette ex-zone de localisation. Cette étude a été menée avec un échantillonnage raisonné destiné à être limité aux anciennes travailleuses du sexe et aux femmes qui vivent encore autour de cette ancienne zone de localisation en tant que groupe témoin. Cette étude a inclus 76 femmes, dont 52,6 % étaient d'anciennes travailleuses du sexe. Les résultats des frottis de Pap n'ont montré aucune lésion précancéreuse du col de l'utérus chez aucune des participantes. Les comparaisons entre les groupes de CSW et de contrôle n'ont montré aucune différence dans les résultats des tests de Pap. Des résultats d'infection ont été trouvés dans 36,1% du groupe CSW. La détection précoce de l'ADN du papillomavirus humain (HPV) est nécessaire pour identifier les facteurs de risque du cancer du col de l'utérus dans ces populations. *(Afr J Reprod Health 2023; 27 [2]: 45-48).*

Mots-clés: Cancer du col de l'utérus ; la détection précoce; frottis de pap ; santé publique; santé des femmes

Introduction

Localization, which was once one of the largest in Southeast Asia, has been shut down by the government since 2014. In addition to economic problems faced by former commercial sex workers (CSW) in this area, health problems cannot be ignored. Despite not engaging in commercial sex activities, former CSW could be at risk for cervical cancer. Cervical cancer is the most common gynecological cancer in developing countries[1]. Global statistic reported that there were an estimated 565.541 new cases and 280.479 deaths because of cervical cancer in 2019[2].

Risk factors for cervical cancer include early sexual activity; having multiple partners; not using condoms; history of chlamydia and human immunodeficiency virus infections; and contraceptive use[3]. In addition, smoking and high parity are also thought to be associated with the risk for cervical cancer[4]. Therefore, CSW require early screening for cervical cancer, namely using the Papanicolaou (Pap) smear test. This study aimed to determine the prevalence of cervical cancer based on early detection using Pap smears in former CSW in an ex-localization area.

Methods

The research was conducted in an ex-localization area in one of the cities in Indonesia after obtaining ethical approval from the Medical Research Ethics

Committee of Universitas Surabaya. The study was conducted with purposive sampling, which was intended to be limited to former CSW and adult women who still live around this ex-localization area as the control group. The reason for using purposive sampling was because they are hard to reach group of people. Information about this research was disseminated to the neighborhood/hamlet/urban village to collect data on former CSW in the area. Identifying former CSW was carried out together with village cadres to further persuade individuals to participate in research activities. Adult women living nearby were invited to participate in the control group.

This cross-sectional study aimed to identify the prevalence of cervical cancer using Pap smears and identify the risk of cervical cancer in adult women in the ex-localization area. The inclusion criterion was women aged 21-65 years who were still working in ex-localization areas. Women who had a history of pre-cancerous lesion abnormalities based on previous pap smear tests; have undergone hysterectomy, while menstruating; used tampons or local contraceptives 48 hours before the Pap test were excluded from the study.

All participants were recruited at predetermined times and locations. Before study participation, the participants received an oral explanation of the research procedure and provided their consent to participate in the study. Socio-demographic and health data, including age, marital status, number of pregnancies, smoking status, oral contraceptive drug use, and previous working history as CSW were collected.

Cervical samples were collected from the enrolled participants using a cytobrush and spatula. After fixing smears onto slides, conventional cytology was performed using 95% alcohol fixation. Pre-cancerous lesions based on pap smear results were reported using the Bethesda system.
Data are expressed as quantities and percentages; averages; and standard deviations. The primary outcome was the prevalence of cervical cancer lesions. The secondary result was a correlation between sociodemographic status and cervical cancer health. Data analysis was performed using the SPSS 24 software.

Results

In collaboration with village cadres, initially, former CSW (n = 120) who were still in the area were identified. Since invitations and explanations about activities were carried out in an individual persuasion manner, they voluntarily wanted to participate in research activities. Adult women living nearby were invited to participate in the control group. On the day of activity, only 76 women participated in the research activity held: 52.6% of them were former CSW. One subject was excluded because she was pregnant, resulting in a total of 75 participants.

Their basic characteristics are listed in Table 1. The average age of the participants was 43.3±11.4 years. There was no difference between the basic characteristics in both groups, except for marital status (*p*=0.03) and smoking status (*p*=0.02). The CSW group had more widows and active smokers than did the control group. The age at first sexual intercourse in both groups was not significantly different (*p*=0.20).

Four subjects in each group refused to have a Pap smear procedure. Pap smear results showed no pre-cancerous lesions of the cervix in any of the participants (Table 2). Comparisons between the CSW and control groups showed no differences in Pap smear results. Infection findings based on Pap smears were found in 36.1% of the participants in the CSW group. The majority of the former CSW (41.7%) had non-specific inflammation (Table 3).

Discussion

This study was the first to report early detection of cervical cancer in former CSW in a localization that has been closed for a dozen years. Of note, in this study, pre-cancerous lesions were absent in the former CSW, and it was in contrast with other similar study. In a previous study in Belgium, CSW had a prevalence of pre-cancerous lesions of 38.2% of all ages and 23.6% in those aged over 35 years[5]. Meanwhile, a study in the Dominican Republic reported that 36.1% of CSW had precancerous lesion results[6].

Risk factors for cervical cancer evaluated in this study included age; age at first sexual intercourse; and history of parity, smoking, and oral contraceptive use. The difference between the two groups was only found in smoking status. However, this study did not detect human papillomavirus (HPV) infection, which is a cause of cervical cancer. The incidence of cervical cancer has consistently been related to the prevalence of HPV infection in Indonesia[6].

Table: Baseline characteristics

Parameter		Former-sex workers (n=40)	Control (n=35)	*p*
Age		42.9±8.2	44.3±14.0	0.61
Age first sex		19.6±4.0	21.2±5.0	0.20
Marital status	Single	5	2	0.03
	Still married	17	27	
	Divorced	5	2	
	Widow	13	4	
	Total	40	35	
Frequency Visit to health facility	> 8 times a year	4	3	0.961
	5-8 times a year	6	6	
	2-4 times a year	8	5	
	< 2 times a year	19	13	
	Total	37	27	
Smoking status	Active smoker	10	0	0.02
	Former smoker	6	3	
	Not smoker	24	30	
	Total	40	33	
Parity	0 pregnancy	6	10	0.27
	1-2 pregnancy	16	14	
	3-5 pregnancy	11	4	
	>5 pregnancy	5	4	
	Total	38	32	
Duration using oral contraception	Never	15	15	0.74
	< 5 years	14	8	
	5-10 years	6	3	
	> 10 years	5	3	
	Total	40	29	
Duration become sex worker		6.8±4.7 years		
Duration of non-active as sex worker		13.3±8.9 years		

Tables 2: Pap smear results

Pap Smear result	History becoming sex worker		*p*
	Yes	No	
No infection	23 (63.9%)	22 (71.0%)	0.608
Infection	12 (36.1%)	9 (29.0%)	
Abnormal	0 (0%)	0 (0%)	

Table 3: Pap smear diagnosis in former-sex worker group

Diagnosis	n (%)
Normal	8 (22.2%)
Non-specific inflammation	15 (41.7%)
Non-specific purulent	9 (25.0%)
Specific infection	4 (11.1%)

The prevalence rate of HPV infection at the age of 35-44 years in three cities in Indonesia was reported to be 18.4%, while the prevalence rate of high-risk HPV of all ages was 8.1%[7]. The incidence rate of high-risk HPV in CSW was reported to be as high as 41.7%, higher than that in the non-CSW population (19.8%)[5]. A meta-analysis reported a prevalence for high-risk HPV of 41.7% in the CSW population[8]. However, the low incidence of pre-cervical cancerous lesions in the former CSW in this study may have been due to low HPV infections in the cities we studied. Therefore, early detection examination is necessary in subsequent studies. The relatively short duration of exposure as a sex worker and the relatively long duration of stopping engagement as a sex worker also may have played a role in the absence of pre-cancerous lesion findings in this study.

Conclusion

In conclusion, no pre-cancerous lesions were found in the former CSW in the ex-localization area. Further early detection of HPV DNA is necessary for the identification of risk factors for cervical cancer in these populations.

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Contribution of authors

AW conceived and designed the study as well as the person who wrote the final manuscript and gave supervision. AD collected and analyzed the data and the person who prepared the manuscript. MA collected the data and prepared the draft of manuscript. All authors mentioned in the article have approved the manuscript.

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