

RESEARCH ARTICLE

First Trial of Cervical Cytology in Healthy Women of Urban Laos using by Self-sampling Instrument

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Abstract

Cervical cancer is the most common cancer in Laos women and a screening programme, even with the PAP smear test (PAP test), has yet to be established for routine use. The Pap test is accepted as the most appropriate for cervical cancer screening in some settings but it is not commonly available in Laos hospitals, because there are few cytopathologists and gynecologists have little experience. As a pilot program, seminars for the PAP test were given in 2007 and 2008, and then PAP tests were carried out using self-sampling instrument (Kato's device) with 200 healthy volunteers in Setthathirath hospital, Laos, in 2008. The actual examination number was 196, divided into class I 104 (53.1%), class II 85 (43.3%), class IIIa 4 (2.0%), class IIIb 1 (0.5%), and class V 1 (0.5%) by modified Papanicolaou classification. Four cases had menstruation. There were 6 cases with epithelial cell abnormalities including malignancy. There were 7 cases with fungus and 2 cases with trichomonas in Class II. More than 70% volunteers felt comfortable with the Kato's device and wanted to use it next time, because of the avoidance of the embarrassment and a low cost as compared with pelvic examination by gynecologists. This first trial for PAP test for healthy Laos women related to a hospital found three percent to have abnormal cervical epithelial cells. Therefore, this approach using a self-sampling device suggests that it should be planned for cervical cancer prevention in Laos.

Keywords: PAP test - self-sampling device - cervical cancer - avoidance of embarrassment - Laos

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Introduction

Cervical cancer ranked as the second most common cancer among women worldwide (GLOBOCAN, 2008; Denny, 2012). It reported that there were an estimated 530,000 new cases of cervical cancer and 275,000 deaths in 2008 (GLOBOCAN, 2008; Denny, 2012). About 86% of the cases occur in developing countries, representing 13% of all female cancers (Denny, 2012). In many countries, cytology-based screening programmes have contributed to a reduction in the incidence and mortality of cervical cancer (WHO, 2011).

Laos has a population of 6.13 million and that of 1.79 million women ages 15 years and older who are at risk of developing cervical cancer (Denny, 2012). Current estimates indicate that every 491 women are diagnosed with cervical cancer and 270 die from the disease (Denny, 2012). The crude incidence rate is 15.8/100,000 women per year (Denny, 2012), which ranks as the 1st most frequent cancer among women in Laos. However, there is not cytology-based screening programme for cancer prevention. Furthermore, it is not popular to use

cytology stained with Papanicolaou staining, unfortunately. Therefore, there are no data concerning to cytological background incidence in healthy women.

In this paper, we tried to examine the cervical PAP test for 200 healthy volunteers in Setthathirath hospital, Laos, using self-sampling instrument (Kato's device ; Figure 1), which was earlier tested in the North-east of Thailand and shown to have promise (Pengsaa et al., 1997; 2003; Sanchaisuriya et al., 2004).

Materials and Methods

Subjects

Women working in Setthathirath hospital and the relatives, age 30 years and above were invited to participate in the study voluntarily. It was advertised on ahead that especially those who had never administered to hospital for gynecological symptoms were encouraged by health personnel to take part with priority. The expected sample size was 200 subjects (mean 39.5 year-old). Women were consented our purpose by Lao doctors (NV, VP and PM) and signed before they participated in this

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ວິທີການສົ່ງຕົວຢ່າງໄປກວດທາງໄປສະນີ

ກາ ເກັບຕົວຢ່າງເອັງດ້ວຍວິທີ-ເຄື່ອງມືກາໂຕເພື່ອສົ່ງກວດມະເຮັງປາກມິດລູກ



Figure 1. The Use Manual for Kato's Device with Illustrations and Lao Language

Table 1. The Result of Cervical Cancer Screening by Self-sampling Device in Setthathirath Hospital.

| Papanicolau's classification | Number of cases (%) |
|------------------------------|---------------------|
| I | 105 (53.6) |
| II | 85 (43.4) |
| IIIa | 4* (2.0) |
| IIIb | 1 (0.5) |
| IV | 0 |
| V | 1 (0.5) |
| Insufficient materials | 4 (2.0) |
| Total | 200 |

*It was judged as one ASC-US, two LSILs and one HSIL in Bethesda system

study. They were instructed how to use Kato's device and to obtain a self-sampling smear (Figure 1).

The one hundreds ninety six samples from Kato's devices were processed for PAP staining at department of pathology in Setthathirath hospital with cytotechnician and laboratory technicians of both Laotian and Japanese, and interpreted by both Laotian pathologists (NV and PM) and Japanese cytopathologists (SN and NY). It was basically classified by the criteria with modified Papanicolau classification by Japan Association of Obstetricians and Gynecologists (Japan Society of Obstetrics and Gynecology, 1997) and Bethesda system (Solomon, 2002), although Laotian and Japanese pathologists were not familiar routine for Bethesda system in 2008.

Results

The examined and judged cases were 196 slides. As 4 cases had menstruation, those were judged as unsatisfactory materials. It was summarized in Table 1. It was divided to class I 104 (53.1%), class II 85 (43.3%), class IIIa 4 (2.0%), class IIIb 1 (0.5%), and class V 1 (0.5%). There were 7 cases with fungus (Candidiasis) and 2 cases with trichomonas in Class II.

Discussion

Data of cervical cancer incidence and mortality in Laos reported by the WHO in 2008 (GLOBOCAN, 2008) were shown as those of neighboring countries, in spite of not available even now, although cancer registration system in Laos has started in 2010. It has been actually estimated, because there are few regular (surgical) pathologists (6 persons in 2008 and even now) in whole Laos and it was not popular to diagnose with histopathological examination as routine medicine like western countries. However, it seems to be a fact which Lao women have been died by cervical cancer. Therefore, it is important to examine and recognize the status of cervical cytology among healthy women. The cytology-based screening programme has never been performed in this country until now. This cervical cancer PAP test screening for healthy women was first trial in Laos. In this study, we examined the healthy women volunteers related to working in Setthathirath hospital, in Vientiane, where located in urban in Laos. It was found six cases with abnormal epithelial cells (3.1%), in spite of participating healthy volunteers with medical knowledge. It seems to be high rate compared with Japanese experience (approximately 0.8-1.2% in Okinawa prefecture, unpublished data). Therefore, Laos needs to propose the screening system to decrease the death by cervical cancer.

We asked the participants concerning to the impression about the Kato's self-sampling method. The response was that 78% of participants like to use the Kato's self-scraping device comparing with collected by gynecologists, although 10% were worried that it could not collecting cells. However, in this study, we could not judge well for the cytological specimens with PAP staining, because there were degenerative change and poor staining properties. We do not think that the poor-stained specimens were

not caused by self-sampling procedure (Kato's device). It seemed to be due to alcohol in PAP staining procedure, because alcohol is too expensive in Laos and it is difficult to use enough alcohol in the staining. Actually, Pengsaa et al reported the research used the Kato's method in Thailand (Pengsaa et al., 2003). In their paper, the PAP smears with Kato's self-sampling device were compared with those collected by the gynecologist, and the concordance was 96.5 percentage. Therefore, we think that it is necessary to improve the environment in pathology laboratory even in urban Laos, although Phongsavan et al. (2010) reported that rural women in Laos have limited knowledge about cervical cancer and even less about screening and prevention, and that it is necessary to educate the general community about the disease and its prevention. In fact, sixty percent of women in Vientiane, a capital of Laos, can check up for uterine cancer at a hospital, but 95 percent of those lived in rural districts can not administer a hospital where is far from their residences.

Recently, WHO has recommends to inoculate with HPV vaccine especially to the developing countries. However, there are no data for HPV infection rate in those countries including Laos (WHO/ICO, 2010). Therefore, we have to examine the status of cervical cytology in healthy women and HPV infection as soon as possible. Now we are planning to do this.

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