Editorial

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Screening of uterine cervical cancer in low-resource settings

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Uterine cervical cancer is the second most common malignant disease of women worldwide, and accounts for about one tenth of the total number of female cancer deaths. Even though uterine cervical cancer has been decreased as a result of widespread use of effective screening tests for premalignant lesions in developed countries, the cancer burden such as incidence and mortality is disproportionately high in many less-developed countries [1,2].

The incidence of uterine cervical cancer is highly variable according to various geographic areas, especially high in East Africa, Central America, the Pacific Islands, and South-Eastern Asia, based on HPV infection and screening practice [3].

Cervical screening is accepted as the most effective tool for the control of uterine cervical cancer. However, the existing screening programs are insufficient to reach a goal in many less-developed countries [4]. In two upcoming papers, Singh et al. [5] and Nuranna et al. [6] present the important experiences for screening of uterine cervical cancer in low-resource settings of South-Eastern Asia.

First, Singh et al. [5] reported poor attitudes and practices among cervical cancer screeners consisting of staff nurses, despite knowledge of the gravity of uterine cervical cancer and prevention by cytologic screening. The cytologic screening has been accepted to be effective in reducing the incidence and mortality from uterine cervical cancer in many developed countries [7]. However, several important elements are crucial for successful and effective cytologic screening. It is critical to train the relevant health care professionals-smear takers (physicians, nurses, midwives), smear readers (cytotechnologists), cytopathologists, colposcopists and program managers-for attitudes as well as practices like the issues of the report by Singh and colleagues, to ensure adequate quality of the cytologic smear. Funding should be also enough to provide efficient and high-quality laboratory services, and referral system to ensure that women with an abnormal cytology could attend for management and follow-up. Additional important issues are the priority age group to be screened, the definition of an abnormality to be treated, and the timing of subsequent screening based on nationwide budget for the public health care system [8].

Second, Nuranna et al. [6] reported successfully implemented See and Treat program as a promising way to screen and treat precancerous lesion of the uterine cervix in low-resource setting. The technical and financial limitations of cytologic screening in low-resource settings have led to the evolution of alternative screening tests such as visual inspection of the uterine cervix with 3-5% acetic acid (VIA). Even though VIA is limited by low specificity of <85% and lack of standardization of quality control, it is simple, inexpensive, low-technology method, no laboratories to report, real-time availability of results, better compliance and a short training period of less than 2 weeks. Thus, VIA could be attractive alternatives to cytologic screening and be more readily integrated into primary health care systems in low-resource settings.

Molecular and epidemiologic studies have consistently shown that the majority of uterine cervical cancers are caused by persistent infections with high-risk types of human papillomavirus (HPV). Current HPV DNA test can detect the presence

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of viral markers in close to 100% of invasive cervical cancer, and 75-90% of precancerous lesions [9,10]. Thus, despite uncertain cost-benefit effect and low specificity especially in younger women, HPV DNA tests could be attractive alternatives to cytologic screening programs. In this sight, HPV prophylactic vaccines seem to be fancy and crucial to control uterine cervical cancer. However, the application of HPV vaccine into public health care system may be difficult and impossible in low-resource settings because of high costs. Thus, HPV prophylactic vaccines cannot replace screening for control of uterine cervical cancer.

Cytology should be the gold standard approach as screening strategies of uterine cervical cancer. However, VIA could be attractive alternatives to cytologic screening with substantial promise in low-resource settings. HPV DNA test also could be the preferred approach, if its cost and the laboratories are available. Importantly, screening strategies of uterine cervical cancer should be planned, organized and operated within the context of nationwide program for cancer control.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. International Agency for Research on Cancer. GLOBOCAN 2008: cancer incidence and mortality worldwide in 2008 [Internet]. Lyon: International Agency for Research on Cancer; c2010 [cited 2012 Jun 10]. Available from: http://globocan.iarc.fr.
2. Parkin DM, Bray F, Ferlay J, Pisani P. Estimating the world cancer burden: Globocan 2000. Int J Cancer 2001;94:153-6.
3. Bosch FX, de Sanjose S. Chapter 1: Human papillomavirus and cervical cancer--burden and assessment of causality. J Natl Cancer Inst Monogr 2003;(31):3-13.
4. World Health Organization. Cervical cancer screening in developing countries: report of a WHO consultation. Geneva: World Health Organization; 2003.
5. Singh E, Seth S, Rani V, Srivastava DK. Awareness of cervical cancer screening among nursing staff in a tertiary institution of rural India. J Gynecol Oncol 2012;23:141-6.
6. Nuranna L, Aziz MF, Cornain S, Purwoto G, Purbadi S, Budiningsih S, et al. Cervical cancer prevention program in Jakarta, Indonesia: See and Treat model in developing country. J Gynecol Oncol 2012;23:147-52.
7. Nanda K, McCrory DC, Myers ER, Bastian LA, Hasselblad V, Hickey JD, et al. Accuracy of the Papanicolaou test in screening for and follow-up of cervical cytologic abnormalities: a systematic review. Ann Intern Med 2000;132:810-9.
8. Miller AB, Sankaranarayanan R, Bosch FX, Sepulveda C. Can screening for cervical cancer be improved, especially in developing countries? Int J Cancer 2003;107:337-40.
9. Nobbenhuis MA, Walboomers JM, Helmerhorst TJ, Rozendaal L, Remmink AJ, Risse EK, et al. Relation of human papillomavirus status to cervical lesions and consequences for cervical-cancer screening: a prospective study. Lancet 1999;354:20-5.
10. Clavel C, Masure M, Bory JP, Putaud I, Mangeonjean C, Lorenzato M, et al. Human papillomavirus testing in primary screening for the detection of high-grade cervical lesions: a study of 7932 women. Br J Cancer 2001;84:1616-23.

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