酢を用いた隔年の子宮頸がんスクリーニングは死亡率を低下させる（Abstract＃2）

有効で手軽な価格の子宮頸がんスクリーニング法が低所得国の何千人もの女性の命を救うことが期待される

Effective, affordable cervical cancer screening strategy promises to save thousands of women's lives in low-income countries

第49回American Society of Clinical Oncology年次集会で発表された大規模無作為化トライアルの結果、訓練されたプライマリヘルスケア職員が行う酢酸（VIA、つまり酢）を用いた目視検査による隔年スクリーニングが有効であり大規模な実施が可能であることが示された。がんの既往のないインドの女性（35～64歳）がVIAを用いた隔年スクリーニング（75,360人）またはスクリーニングなし（76,178人）に無作為に割り付けられた。コントロール群は組み入れ時に一通りのがん教育を受け、スタディ期間中に子宮頸がんの徴候や症状が何かあれば報告するように指示された。スクリーニング群は4回のVIAスクリーニングと24か月間隔のがん教育を受けた。浸潤性子宮頸がんの発生率は両群間で差はなく（スクリーニング群100,000人当たり26.7人、コントロール群100,000人当たり27.5人）、スクリーニングにより過剰診断に結びつくことはないことが示唆された。VIAを用いたスクリーニングにより、子宮頸がん特異的死亡率が31%低下した（100,000人当たりそれぞれ11.1人および16.2人）。このスクリーニング法により、インドにおいて毎年22,000件の子宮頸がん死を防ぐことができ、世界中の資源の乏しい国では73,000件近いであろう、と研究者らは推定している。

Full Text

A large, randomized study conducted among 150,000 women in India over a period of 15 years reports that biennial visual inspection with acetic acid (VIA), or vinegar, delivered by primary health workers, reduced cervical cancer mortality by nearly one-third (31 percent). The study was presented at a plenary session of the 49th Annual Meeting of the American Society of Clinical Oncology Cervical cancer is the leading cause of cancer death among women in many developing countries, where there is little or no access to Pap screening. The researchers estimate this strategy could prevent 22,000 cervical cancer deaths every year in India and close to 73,000 in resource-poor countries worldwide.

"We hope our results will have a profound effect in reducing the burden of cervical cancer in India and around the world," said lead study author Surendra Srinivas Shastri, M.D., a professor of preventive oncology at Tata Memorial Hospital in Mumbai, India. "This is the first trial to identify a cervical cancer screening strategy that reduces mortality and is feasible to implement on a broad scale throughout India and in other developing countries. Our trial used primary healthcare workers who can easily access women in the community, which is critical in India and other countries that lack sufficient nurses, physicians, and laboratory facilities. We are already working with state and national health authorities in India to make this screening strategy and health education available to women throughout the country."

In this study, women aged 35-64 years with no prior history of cancer were randomly assigned to biennial screening with VIA (75,360 women) or no screening (76,178 women), which is the current standard of care in India given that the infrastructure does not allow for country-wide Pap screening. According to the authors, in accordance with international standards for clinical research – including cancer screening trials – interventions are tested against the local standard of care. The control group received one round of cancer education, at enrollment. Women in the control group were asked to report to the primary health workers any signs or symptoms of cervical cancer that they noticed on the basis of what they had learnt during the initial cancer education sessions. The health workers then directed them to the Tata Memorial Hospital (where they received diagnosis and treatment at no cost) or to other nearby facilities of their choice. The screening group received four rounds of VIA screening and cancer education at 24-month intervals between 1998 and 2010. All trial participants were offered free cervical cancer treatment, if diagnosed.

The incidence of invasive cervical cancer was comparable in the two groups, (26.7 per 100,000 in the screening group and 27.5 per 100,000 in the control group), suggesting that screening did not lead to overdiagnosis. Screening with VIA resulted in a 31 percent reduction in cervical cancer-specific death rates (11.1 and 16.2 per 100,000, respectively). There was also a seven percent reduction in the overall death rate, because cancer was often diagnosed at an earlier stage in the screening group, although the difference in the overall death rate was not statistically significant.

According to the authors, based on the results of their study, Indian health officials in Maharashtra state, where the trial was conducted, are preparing to train primary health care workers to provide VIA screening to all women aged 35-64 years in the state – including women who participated in the study – at the same 24 month interval as was explored in the trial. In addition, the authors stated that the Indian government is working to implement VIA screening country-wide and has plans to reach out to other low to moderate income countries to inform them of these results and offer training resources.

In high income countries, screening for pre-cancerous and cancerous cells using Pap smears has reduced cervical cancer incidence and deaths by 80 percent. In India, however, large-scale Pap smear screening or HPV DNA testing is not currently possible due to lack of resources, laboratory infrastructure, and medical professionals. In this clinical trial, VIA was performed by primary health workers – community-based, non-medical personnel who received special training and provide basic health care services in areas where physicians and nurses are unavailable.

In 1996, around the time this study was initiated, the Indian Council of Medical Research estimated that, even if the number of existing Pap smear facilities in India were multiplied 12 times, they would only be able to provide a single round of screening to 25 percent of eligible women in 10 years. In 2006, the Government of India constituted a committee with assistance from World Health Organization to develop guidelines for population wide cervical cancer screening in India. This committee again observed that Pap smear based cervical screening was not feasible in India except at a few centers. Given that cervical cancer is the leading cause of cancer death in women in India, a strategy implementing early detection and treatment of the disease could have a profound impact on the state of women's health in the world's second largest country.

Previous studies have suggested VIA is a reasonable alternative to Pap smears or HPV DNA testing for its low cost and ease of use. The VIA test is performed by applying vinegar to the cervix using a cotton swab. After 60 seconds, the cervix is examined with the naked eye using a lamp. Pre-cancerous tissue turns white when vinegar is applied, whereas healthy tissue does not change color. The results are known immediately, a very important advantage in rural areas where women might otherwise have to travel for hours to see a doctor.

Two randomized population-based clinical trials of VIA screening were conducted in parallel with the present study in India but the strategies proposed in those studies are not implementable at the national level due to their requirement for trained nurses or sophisticated laboratory facilities. In the first study, a single round of VIA screening provided by trained nurses led to reduced cervical cancer mortality. The second study compared four cervical cancer prevention strategies: primary health workers delivering a single round of VIA screening, technicians delivering a single round of HPV DNA testing, technicians delivering a single round of Pap screening, and cancer education. That study found that a single round of HPV DNA testing reduced cervical cancer mortality, but a single round of VIA screening by primary health workers did not, nor did a single round of Pap testing.

The present study used primary health care workers, who are, according to Dr. Shastri, the only health professionals available to deliver VIA screening in remote and rural parts of India. The current trial thus addresses a critical gap in women's health in India and similar settings. The primary health workers that performed the screenings for this study were local women with at least 10th grade education and good communication skills. The workers received four weeks of intensive training at the beginning of the study, and one-week refresher courses every year.

The study was supported in part by the National Institutes of Health and Women's Cancer Initiative.

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