Effectiveness of Korean National Cancer Screening Program Reducing Cervical Cancer

Yoon Jung Choi, M.D., Ph.D.1, Dong Wook Kim, Ph.D.2, Jeong Hye Kie, M.D., Ph.D.1

Department of Pathology1, Research Institute2, National Health Insurance Service Ilsan Hospital, Goyang, Korea

Background

In Korea, cervical cancer has steadily decreased from 18.6 per 100,000 people in 1999 to 11.7 in 2011 since the country conducted a national cancer screening program in 1999. However, cervical cancer incidence ranked seventh in women with 3.3 percent in 2013, and is still highly ranked with a 6 percent distribution among female cancer patients in 2013. The national cervical cancer screening test (NCCST) by pap smear actively contributed to early detection and treatment of cervical squamous cell carcinoma. According to the expansion of screening targets under age 30 in 2008 and 20 in 2016 due to changes in the national cancer screening policy, we expected the change of incidence rate of cervical cancer and precancerous lesion.

Objectives

We evaluated the changes in the pattern of cervical cancer lesions and precancerous lesion as the number of people subject to examination increases due to changes in the national cancer screening policy. And we investigated to understand the status of quality control and quality assurance of NCCST. We compared the results of a NCCST with a confirmed diagnosis after gynecologic clinic examination to review the efficacy of mass screening test.

Materials and Methods

Conclusions

- In spite of continuous decrease in incidence of HSIL and cervical cancer due to national cancer screening program, an increased incidence of ASCUS and LSIL lesions was observed as the target age of NCCST was lowered due to policy changes.
- The quality control of NCCST was less than 3% of ASCs/Total test % below the recommended standard of 5%, but the ASCUS/SIL ratio was higher than the recommended of 3. This is mainly due to the increase in ASCUS incidence as the age of the test target is reduced, and it is also thought to have an effect on differences in quality control by institution.
- The frequency of abnormal glandular cells (AGCs) in NCCST was very low compared to the frequency of ASCs. Although squamous cell carcinoma was on the decrease trend, while the frequency of adenocarcinoma was unchanged.
- Until now NCCST pap smear in KOREA functions quite good as a mass screening test. Further efforts should be followed to encourage participation in NCCST for over 60 years old, MAP recipients and non-urban resident groups.

Results

- Specificity & Sensitivity of NCCST
- % of >ASCs according to glandular cells
- Changes in the participation rate of the NCCST by age
- Comparison of visiting rates for GYN clinics based on results of NCCST