Program on Breast Cancer Screening in China

Xishan Hao[1], Kexin Chen[2], Lingzhi Kong[3], Hongji Dai[2], Zhenglong Lei[3], Zhaoxiang Ye[4], Haixin li[2], Hong Liu[5], Xiuying Li[6], Peishan Wang[1]

[1]Public Health, Tianjin Medical Univ., China, [2]Department of Epidemiology and Biostatistics, Tianjin Medical University, Cancer Institute and Hospital, Tianjin, China, [3]Disease Prevention and Control Bureau, Ministry of Health of the People's Republic of China, Beijing, China, [4]Department of Radiology, Tianjin Medical University, Cancer Institute and Hospital, Tianjin, China, [5]Department of Breast Oncology, Tianjin Medical University, Cancer Institute and Hospital, Tianjin, China, [6]Department of Ultrasonography, Tianjin Medical University, Cancer Institute and Hospital, Tianjin, China

Xishan Hao

Background

Breast cancer is the most common form of malignancy among women. Secondary prevention such as early detection, early diagnosis and early treatment is important in preventions for breast cancer. Up to date, early detection is the most proven way to fight breast cancer. Population-based large scale cancer screening program has never been well organized in China before. From the year of 2006, Chinese Ministry of Health has been conducting a program on early detection and treatment of cancer sponsored by central financial assistance. Breast cancer screening is involved in this program in 2008.

Purpose

In principals of detection of non-invasive stages of breast cancer, reducing the frequency of invasive cancer development, as well as identification of cancer at an early stage, This screening program is clearly aimed at early diagnosis and improved prognosis of breast cancer, and in this way searching for an optimal scheme for effective breast cancer screening in China, which, from either social or economical aspect, is fit for Chinese women best.

Methods

Working with the Chinese Ministry of Health, Chinese Anti-cancer Association (CACA) is leading and coordinating a large scale breast cancer screening among 530,000 women in 30 provinces in China. In this program, the women included are aged from 35 to 69 years old. The screening scheme is a combination of clinical breast examination (CBE), mammography (MAM), and ultrasound (US), pathological examination will be as the standard of the final diagnosis. After being asked to sign an informed consent form, all subjects enrolled in the study were interviewed to gather demographic data and risk factors for breast cancer. CBE, MAM or US was undertaken by local hospitals. Data collection was done by local centers for disease control and prevention (CDC) and then gathered and analyzed by CACA. Based on this program, a pilot study was conducted to evaluate the effectiveness of CBE, MAM and US for breast cancer screening.

Results

The response rate of eligible women whom we approached for recruitment was 52.41%. At the end of 2008, 273 breast cancers and 3823 benign tumors were diagnosed in 448177 actually screened women. Most of the patients

have been treated as soon as possible. In this screening, cancer patients detected before stage accounted for 40.16%, which is higher than 23.06% in non-screening population. In our preliminary analysis, we calculated sensitivity rate of CBE, MAM and US, which is 52.6%, 91.9% and 65.8% respectively. This project is still ongoing this year.

Conclusions

Progression of breast cancer can be arrested by early detection and treatment at a sufficiently early phase. Population-based cancer screening has brought about a paradigm shift in our approach to the diagnosis and treatment of breast cancer. The method we are using in the screening program is basically suitable to China recent situation. Future research should focus on increasing breast cancer screening in this population.