Impact of Cervical Cancer Screening in a Referral Centre

ABSTRACT

Settings Our centre is a public referral and treatment centre situated in the Chennai metropolis. The analysis of the number of women diagnosed with cervical cancer at our centre was performed to find out the impact of low-cost cervical cancer screening in bringing down the incidence of cervical cancer.

Aim To find out the number of women diagnosed with cervical cancer over the past 3 years from 2011 to 2013, in a referral centre in Chennai, to assess the impact of the ongoing cervical cancer screening program.

Methods The number of women diagnosed with cervical cancer and gynaecological cancer from 2011 to 2013 were noted from the records of histopathological reports and maintained in the colposcopy and pathology departments.

Results In 2011, the number of women diagnosed with cervical cancer was 782. The majority of 739 women had squamous cell carcinoma and a less number of 43 women had adenocarcinoma. The following year 2012, the number of women with cervical cancer showed a promising decrease to a total of 672, and further decreased to 599 in 2013. Squamous cell carcinoma was diagnosed in 655 women in 2012 and 575 women in 2013. In the year 2011, the number of women with squamous cell cancer was larger in the age group of 50–60 years, and the largest numbers of women with adenocarcinoma were in the age group of 41–50 years. There was a significant reduction in the incidence of cervical cancer in all the 3 years ($P < 0.0000001$).

A fall in the percentage of cervical cancer among total gynaecological cancers was also observed.

Conclusion A significant reduction was observed in the incidence of cervical cancer over the past 3 years. The ongoing State Cervical Cancer Screening program could probably have contributed to effect this change.

KEYWORDS incidence of cervical cancer, cervical cancer screening, cancer of cervix

INTRODUCTION

Cervical cancer is the second commonest cancer affecting women worldwide and also continues as the most common cause of death by cancer, among women living in the developing countries.

Epidemiological and molecular studies have shown that human papilloma virus (HPV) infection is the most important risk factor for cervical cancer. Most of the sexually active women and men are infected at some point in their lives and some may be repeatedly infected. At any given time, about 6.6% of women in the general population are estimated to harbour cervical HPV infection. Nearly, all cases of cervical cancer can be attributable to HPV infection.

The key to control the problem of cervical cancer lies in periodic screening, early detection and treatment. Chennai, south India is a high incidence area for cervical cancer with an age standardised incidence of cervical cancer of 19.3 (2012 WIA, Chennai).

In 2010, the Tamil Nadu State Government launched a cervical cancer screening programme. The programme provided referral and treatment for women with positive results for simple screening tests. The tests done were visual inspection of cervix after application of 5% acetic acid also termed as VIA, and visual inspection of cervix after application of Lugol’s iodine termed VILI (VIA/VILI TESTS). Women with positive results for VIA/VILI tests are referred for pap smear, Colposcopy and if indicated cervical biopsy under colposcopic direction. Histopathological examination reports of biopsy tissue were issued provide by Pathology departments. The treatment for cervical...
Pharm Biomed Sci. -9,10.1,3 Colposcopes have also achieved a further reduction in the incidence of cervical cancer.

Total number of women diagnosed with cervical cancer in the year 2011–2013 shows a steady decline in the total numbers (< 0.0000001).

India also has the highest age-standardised incidence of cervical cancer in South Asia at 22, compared to 19.2 in Bangladesh, 13 in Sri Lanka and 2.8 in Iran. Chennai, south India is a high-risk belt for cervical cancer with an age-standardised incidence rate of 19.3 (2012 WIA, Chennai).

Our Institution is a public, referral and treatment centre for obstetric and gynaecological disorders including gynaecological cancers and is situated in the Chennai metropolis. The gynaecological outpatient department has yearly attendance of at least 15,000 women. Referrals are from neighbouring urban hospitals and also from neighbouring suburban centres as well as rural district hospitals.

The Tamil Nadu state government had recently launched a cervical cancer screening program. Due to the constraints of limited resources and low budgets provided for cervical cancer screening, a very low cost method of VIA, followed by VILI is being used in the public screening centres. In most centres, an instrument called Magnavision, which has a large lens fitted with a light source which provides a low magnification of 5×, is used for cervical cancer screening. Colposcopes have also been provided in many centres. The program made it possible for referral and treatment for women with positive tests in the nearest government centre.

The NCD programme launched by the Government of Tamil Nadu became fully operational in 2010 and our centre witnessed more and more referrals from all neighbouring health centres.

RESULTS

In the year 2010, our centre recorded a total number of 786 women diagnosed with cervical cancer. In 2011, the number of women diagnosed with cervical cancer was 800. The majority of 757 women had squamous cell carcinoma, and a less number of 43 women had adenocarcinoma. In the following year 2012, a total of 2,609 women were screened for cervical cancer. Around 285 women had positive VIA/VILI tests. In this year, the number of women with cervical cancer showed a promising decrease to 672. In 2013, a total of 3,984 women were screened for cervical cancer. A total of 476 women had positive VIA/VILI tests, and the number of women diagnosed with cervical cancer showed a further decrease to 599. Squamous cell carcinoma was diagnosed in 655 women in 2012 and 575 women in 2013. The number of women with squamous cell cancer was largest in the age group of 50–60 years in 2011 and largest numbers of women with adenocarcinoma were in the age group of 41–50 years. From the year 2012, the largest number of women with squamous cell cancers and adenocarcinoma of cervix was in the age group of 41–50 years. The reduction of total number of women diagnosed with cervical cancer was significant for both the years (P < 0.0000001).

A fall in the percentage of cervical cancer among total gynaecological cancers was also observed. A significant reduction was observed in the incidence of cervical cancer over the past 3 years. The ongoing State Cervical Cancer Screening program could probably have contributed to effect this change.

CONCLUSION

The available evidence showed the remarkable reduced incidence of cervical cancer in women attending this centre. This would also probably be reflecting the increased screening measures of the Non Communicable Disease program as one of the contributing factors which had brought about this change. This would be useful to plan and suggest recommendations for an even more efficacious screening strategy to achieve a further reduction in the incidence of cervical cancer.

Fig. 1 shows a steady decline in the total numbers and incidence of cervical cancer in the 3 years from 2011 to 2013.

The largest numbers in the age group of 51–60 in 2011 had shifted to the age group of 41–50, probably because of earlier detection. The higher number of women in the very young age group below 30 years

![Fig. 1](image-url)
in 2012 was possibly because of increased awareness brought by the screening groups, which are operational in the whole state.

Squamous cell cancer was the type affecting the majority of women in all 3 years. Women aged between 51 and 60 were the most affected group, followed by the women aged between 41 and 50 years.

Adenocarcinoma affected younger women in the age group between 41 and 50 years and followed by the next affected group aged between 51 and 60 years.

There were no women in the very young age group below 30 years in 2012 and 2013.

REFERENCES