Cancer of the cervix is a common cancer that afflicts Indian women - physically, psychologically, socially and financially. This disease affects not just the woman but also her family and the society. It is estimated that yearly 1,34,420 Indian women are newly diagnosed with cancer of the cervix and each year the disease kills an estimated 72,825 Indian women. The majority of these women diagnosed with cancer of the cervix in India have never been screened for the disease. By the time most women with symptoms of cancer of the cervix seek medical help - the disease has already advanced.

Developing countries have over 80 per cent of the world’s burden of cancer of the cervix with India having one fourth of the world’s burden of the disease. Cancer of the cervix has declined significantly in industrialized countries in the last several decades mainly due to their implementation of effective population based prevention programmes.

It is predicted that if conditions remain the same in India, by 2020, the number of Indian women newly diagnosed with cancer of the cervix will be 1,82,027 and over a lakh (1,01,362) Indian women will succumb to the disease each year. India’s network of cancer registries provides information on the burden of the disease as well as the associated mortality. Data from hospital based cancer registries in India show that about one third of the women who register for cancer diagnosis each year in India suffer from cancer of the cervix. Although cancer of the cervix has been diagnosed in women as young as 20-24 yr of age, it is found more commonly in women aged between 40 and 54 yr (the peak being 45-49 yr).

Cancer of the cervix is caused by infection with certain high risk types of human papillomavirus (HPV). At least 15 HPV types can cause cancer and two of these, HPV-16 and HPV-18, are associated with over 70 per cent of cervical cancer cases globally and in India. The prevalence of high risk HPV in the general population in India is reported to be around 10-12 per cent. HPV infection mostly occurs within a few years after marriage (or after sexual initiation). If the woman is susceptible to persistent infection, it can lead to development of precancerous lesions of the cervix which, if not detected and treated, can progress to advanced cancer of the cervix over the next 15 to 30 years.

There is an enormous amount of data on the strengths and weaknesses of the various preventive methods available in India and worldwide. Unfortunately, many are available and accessible only to the privileged. Alternative methods for screening such as visual inspection with acetic acid (VIA) and technological advances have provided us with newer tests such as HPV DNA test which is an objective test and various approaches to provide screening and treatment. Cuzick et al reported that HPV DNA test has consistently high sensitivity, however, the sensitivity of cytology as a screening test was variable. Demonstration projects to assess the feasibility of using HPV DNA test are underway in several countries globally including urban and rural India and results of these demonstration projects are awaited. Self-sampling for genital HPV DNA shows promise and has the potential to take the screening services more accessible to the community. Irrespective of the screening test and diagnostic strategy it is vital that all women who test positive for cervical precancer shall be treated as the lesions left untreated can progress to cancer. The ‘screen and treat’ strategy, enables provision of precancer treatment immediately. Lost to follow up for treatment is a well known challenge and strategies to provide appropriate treatment such as the
‘screen and treat’ approach enables minimizing lost to follow up of women who test positive for precancer.

The advent of HPV vaccines has added a new weapon in the fight against cancer of the cervix by preventing initial HPV infection through vaccination. A comprehensive disease control initiative - a combination of improved screening and treatment of precancerous lesions (secondary prevention) with effective HPV vaccination (primary prevention) - has the best potential to significantly reduce the burden of cancer of the cervix relatively soon. Based on increasing and strong evidence on the efficacy and feasibility of HPV testing and HPV vaccination, the EUROGIN 2010 roadmap on prevention of cancer of the cervix has taken into consideration the immense potential of two prevention methods - HPV testing and HPV vaccination\(^{14}\). However, to make cervical cancer prevention a reality these interventions should become affordable, available and accessible.

For a significant reduction in the burden of the disease there should be participation by the target group for which awareness among the target group along with availability and accessibility of effective services is important. Multi-pronged efforts in awareness building both among the various cadre of health professionals as well as the general population utilizing both print and electronic media in addition to ‘one on one’ approaches is mandatory. Accurate and consistent messages should be provided utilizing methods that are far reaching and effective. Health education efforts should go hand in hand with provision of preventive services through the national public health system in a systematic manner. As coverage is a key factor, it is essential that services are population based and are made available and accessible to all women in India.

Aswathi et al\(^{15}\) in this issue highlight the fact that building awareness for preventing cervical cancer and the absolute need for screening even in the absence of symptoms are necessary messages for increasing participation in the health intervention aimed at reducing the burden of cancer of the cervix. This study was conducted in Vypin block in Kerala where population based cervical cancer screening was not being implemented. It is encouraging to note that in spite of the absence of a screening programme, over 70 per cent of their study population was aware of cancer of the cervix as a cancer affecting women and that it can be detected early by a screening test. However, this knowledge in itself does not translate into action as only 6.9 per cent of the study population was screened using the Pap test and two thirds of their study population were not willing to be screened in future. It was interesting to note that information on cervical cancer and the benefits of screening test shown in this study was in contrast to the study done in three districts in Uttar Pradesh\(^{16}\) which reported that there was more awareness regarding other cancers such as breast cancer in their study population. Similarly, a formative study done in Andhra Pradesh and Gujarat in 2007-2008 showed low awareness regarding cervical cancer and its prevention\(^{17}\). Aswathi et al\(^{14}\) have sorted the reasons for non-screening into the knowledge factors (51%) constituting the leading group followed by resource factors (15.5%) and psychological factors (10%). A key point emphasized in the study is that women do not get screened because they ‘do not have symptoms’ which is the predominant reason grouped under knowledge factors. Hence, it is crucial that information material and education communicate the fact that screening is vital for all women irrespective of the presence or absence of gynaecological symptoms.

The common sources of information in the study by Aswathi et al\(^{14}\) was reported to be the media followed by health care workers. Such data can provide essential information to develop appropriate messages and sources of information, both key components of an effective communication strategy for increasing acceptance and participation to reduce the magnitude of the disease.

This study has focused only on Pap test as the screening test, probably because VIA and HPV DNA test are implemented mainly through research projects in India and Pap test is more easily available through the private sector. While cervical cytology as a screening test with periodic rescreening provided through organized programmes with an effective call and recall system has played a crucial role in reducing the burden of the disease in developed countries, it has been extremely difficult to set up and maintain cytology based programmes in countries with limited resources. Kerala State, with its high childhood immunization coverage rates, demonstrates that population based interventions are feasible and can generate good participation\(^{18}\).

Reducing the burden of cancer of the cervix when effective preventive methods are available, is a much needed intervention in India. Health education along with screening and precancer treatment services as
an integrated service provided through primary and secondary health care centers has the potential to increase participation in such prevention services. It is necessary that a roadmap for cervical cancer prevention in India is developed soon taking into account the diversity in healthcare in various parts of India. To make cancer of the cervix a disease of the past, collective and concerted effort of policy makers, policy influencers, all cadres of health care workers and civil society is critical.

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