EDITORIAL

CERVICAL CANCER CAN BE CONTROLLED

Cancer of the cervix is the third most common malignancy worldwide and the leading cause of cancer deaths among women in developing countries. It was recently estimated that 466,000 new cases (and 231,000 deaths) occur annually worldwide. Eight per cent of these occur in developing countries, with the highest rate recorded in sub-Saharan Africa, Central America and Asia(1,2).

After many years of heated debate it is now generally agreed that human papillomavirus (HPV), a sexually transmitted agent, is a major cause of cervical cancer(3). Seminal research in Kenya, Uganda and Tanzania in the 1990s confirmed heavy presence of several "aranogenic" types of HPV in cervical cancer biopsies. Indeed, Rogo *et al*(4) reported the presence of multiple types of HPV in cervical cancer specimens from Kenya, a feature found in significantly less frequency elsewhere.

HPV infection which generally occurs in teenage or early twenties and thirties is an indolent problem that slowly causes cellular changes that may lead to cervical cancer after 20 or more years (Table 1)(2).

preventing HPV infection works but is more difficult than preventing other STIs due to its asymptomatic nature and easier transmitability. HPV can remain dormant in virtually every spot in the anogenital region and is difficult to eliminate through available therapies. Barrier contraception and reduction of sexual partners may help reduce the chance of HPV infection in women but its effect on overall reduction of cervical cancer incidence remains unclear(6).

Secondary prevention by screening and treatment of precancerous lesions, already shown to be both feasible and cost-effective, continue to elude the developing world(7). For many years, the Pap smear has remained the gold standard in cervical cancer screening and with adequate coverage and follow up has led to dramatic reduction in the incidence of cervical cancer in Europe and North America(8). Effective Pap screening, however, offers many indomitable challenges that most health systems in developing countries are unable to overcome: opportunistic screening to young low risk women attending

Table 1

Natural history of cervical cancer and programme implications

HPV infection	Low-grade cervical dysplasia	High-grade cervical dysplasia	Invasive cancer
Characteristics HPV infection is extremely common among women of reproductive age	*Characteristics* Low-grade dysplasia usually is temporary and disappears over time. Some cases however, progress to high-grade dysplasia.	*Characteristics:* High-grade dysplasia, the precursor to cervical cancer, is significantly less common than low-grade dysplasia	*Characteristics:* Women with high-grade dysplasia are at risk of developing invasive cancer, this generally occurs slowly, over a period of several years.
HPV infection can remain stable, lead to dysplasia, or become undetectable	It is not unusual for HPV to cause low grade dysplasia within months or years of infection	High grade dysplasia can progress from low-grade dysplasia, or in some cases directly from HPV infection	
Management While genital warts resulting from HPv infection may be treated, there is no treatment that eradicates HPV. Primary prevention through use of condoms offers some protection.	*Management* Low-grade dysplasia generally should be monitored rather than treated since most lesions regress or do not progress	*Management* High-grade dysplasia should be treated, as a significant proportion progresses to cancer.	*Management* Treatment of invasive cancer is hospital-based expensive, and often not effective.

Source: Path: ref (1)

Several risk factors associated with cervical cancer have also been studied extensively. Many are now thought to be mere proxies of HPV infection apart from smoking, parity and nutritional status, which may be independent co-factors in the progression of HPV infection(5).

Simple and effective ways of preventing cervical cancer are known and available. Primary prevention by

family planning and ante-natal clinics; limited or poor quality of cytology services; poor follow up or unavailability of diagnostic and treatment services for dyslapsias and; limited or lack of information for women on the importance of cervical cancer screening(1).

Although developing countries have declined to initiate cytological screening programmes on account of cost, little do they realise that screening and treatment of

precancerous lesions is a more cost-effective intervention compared to management of invasive cervical cancer. It was estimated by the World Bank in 1993 that the cost of screening every eligible woman every five years was US$ 100 per disability-adjusted life year (DALY) gained, compared with US$ 2,600 per DALY for treatment/ palliative care of invasive cancer(9). But it must also be accepted that even these modest comparisons will mean little to countries where per capita annual expenditure on health is less than five US dollars. This is a realisation that has spurred the search for alternative approaches to cervical cancer screening.

Visual inspection (VI) of the cervix is rapidly evolving as a viable alternative for cytology. Visual inspection has evolved from simply looking at the cervix for any signs of early cancer (also known as "downstaging"), to visual inspection with acetic acid without any magnification (VIA)(10).

Results from studies in developing countries now suggest that VIA is as sensitive as Pap smear but less specific. A recent study in Zimbabwe reported sensitivity and specificity of VIA to be 77% and 64% respectively compared to 43% and 91% for Pap smear(11). A pilot study using nurses in health centres is in progress in Western Kenya. A few other studies have added low-power magnification to the procedure with a potential of increased specificity. In this regard the Aviscope has been tested in Indonesia and Kenya(12). VIA offers some advantages over any cytology that may appeal to developing countries. But it also has some limitations that must be taken into consideration by programme designers.

The use of HPV testing in cervical cancer prevention is currently receiving a considerable interest in the developed world. The proposal is to use HPV tests to: identify women with low grade dysplasia to be more aggressively managed; determine women treated for higher grades dysplasia for closer monitoring and; determined women aged 35+ at greatest risk of high grade dysplasia(1,12).

Cost and technology obviously rule out HPV testing as an alternative consideration in developing countries at the moment but a future with a simpler less expensive but accurate test, including prospects of vaccines against HPV may be in the horizon(4).

In this issue of the East African Medical Journal, two papers focus on different aspects of cervical cancer in Africa(15,16). The papers confirm the backward state of cervical cancer prevention and treatment efforts in the region. They give a rather sad if not a hopeless picture. Read closely, however, they also show a myriad of missed opportunities. Failure of health systems to use these opportunities is not a purely resource issue. More important is the vision and the will to make a difference. As a first step, health systems must give cancer a higher priority than is the situation in Africa today. It is only then that the two important critical steps to prevent cervical cancer can be taken, that is, increasing women's awareness and increasingly providing knowledge and skills.

South Africa recently took a bold step in this direction by instituting a National Cervical Cancer Screening Programme. The programme proposes ten yearly Pap smears for women thirty-five years and above. It will be interesting to monitor their progress especially the ability to reach those women at greatest risk of cervical cancer. It is incumbent upon the African countries to closely monitor the South African experience and to endeavour to offer even the most minimum of services in this area. For, as WHO has stated, "in countries where resources are limited, the aim should be to screen every woman in the target group once in her lifetime at about the age of forty years..."(17).

K. O. Rogo, MD, PhD, Fell. Gyn. Oncol., Vice President for Africa and Advisor to the President for Global Affairs, IPAS, P.O. Box 19329, Nairobi, Kenya.

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