
OPENING REMARKS:

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It has been a privilege for me to serve as the Chairman of the Program Committee for this year's Cancer Week. This is the third Cancer Week that the Kenya Cancer Association (KECANSA) has organized. Each Cancer Week has been open to health professionals in a wide variety of disciplines related to health in our national health services. It is with the awareness and appreciation of the continuing importance of cancer to health services providers that this week was held. The Association selected the theme "**CANCER PREVENTION AND EARLY DETECTION**" to emphasize its role in cancer issues in this country. The committee worked diligently to decide on what the topic would be and selected the speakers. I would like to express my appreciation to all members of the Program Committee for their concepts, efforts and excellent work in planning for this week.

There are several features of the lectures that deserve comment. The committee avoided planning a week with emphasis on any specific cancer, each cancer discipline and treatment modality. We wished to emphasise the important features of cancer that can be activated and participated upon by not only the health service providers but also the public laity at large.

In every session, a variety of aspects of prevention and early detection of cancer are presented. The topics of lectures are selected, based on locally and internally acknowledged measures already tested, available, simple and affordable. The topic lecturers are people of wide teaching and national appeals in their specialities. This is a manifestation of our conviction that cancer prevention not only requires everyone's effort but basic information be availed to make it a reality.

There will be frequent opportunities during the coming year to reflect upon the formidable tasks that remain to be done in cancer prevention and early detection in our country, and when called upon KECANSA will welcome and respond to the issues approximately.

Cancer Prevention And Early Detection:- An Overview

Generally speaking, for the control of any disease, prevention is the ultimate goal. Disease as we know, is a reaction of the organism to noxious stimuli. Thus occurrence of disease can be prevented by avoidance of stimuli or the protection of the organism against the stimuli. This is primary prevention.

A broader definition of prevention includes

prevention of complications and sequel of disease by earlier detection and institution of therapeutic measures. This by definition is secondary prevention.

An effective program of prevention requires:-

- Public education, creating an informed motivated population.
- Availability of a medical and health care delivery system that is adequate and acceptable to the population.

The removal or avoidance of cancer causing or associated stimuli in our environment involves either individual or public decisions. Both of course are based upon education of people leading to awareness, motivation and appropriate actions.

An estimated 70% of cancers are caused by environmental factors, with a contribution from an individual's genetic make-up that allows the eventual development of cancer. Thus, there are initiators and promoters of the cancer process offering the opportunities for prevention. It seems clear that concentrating on helping in changing of life style, for example, could have a beneficial effect.

Many of the preventable cancers are those due to habits such as tobacco smoking and alcohol consumption. Tobacco is by far the single most important preventable cause of cancer deaths, perhaps outweighing all other known factors put together.

The decision to avoid or to give up such habits is primarily an individual one. If the exposure cannot be completely prevented, that exposure should be minimized so that the lowest possible risk is achieved. Since between 70-80% of all cancers are caused by environmental factors, avoidance of those factors should lead to tremendous decrease in the incidence of cancer. There is a high level of personal choice or development of lifestyles involved in avoiding many carcinogenic environmental factors. However, the development of one's individual choice and personal lifestyle is related both directly and indirectly to a variety of media, social, political, economic, educational and other factors.

Reduction of cancer associated hazards from air, food additives and the industry on the other hand need public action. Such action must be formalized in legislation, surveillance and enforcement. In primary cancer prevention our roles as medical workers are those

of educators and counsellors. However, these days and in the future, vaccines in prevention by immunization and other protection measures against cancer are extending this role. A new area of clinical research is targeting chemo-prevention. This uses micronutrients and other substances added to the diet to reduce the likelihood of getting cancer and thereby the incidence of cancer. Trials in the use of beta-carotene for the prevention of skin, colon and lung cancers are examples of such initiatives. Retinoids and folic acid have been used in trials to prevent cervical cancer and multiple micronutrients are being used to prevent oesophageal cancer in certain areas of China.

Secondary preventive measures against cancer are aimed at earlier recognition. This also requires an informed motivated public and informed medical doctors whose suspicions are promptly followed by appropriate diagnostic and therapeutic actions.

Symptomless cancers tend to be smaller and more curable than overt disease and some can be revealed by periodic screening of the population. A do-it-yourself aspect is the best screening procedure. Systematic periodic examinations of the breasts, skin, oral cavity and genitalia seem worthy of developing and propagating.

Some screening procedures for cancers that are beyond the abilities of the laity include vaginal cytology for uterine cervical cancer and x-ray mammography combined with palpation for breast cancer and newly developing biochemical methods in screening of prostatic, liver and ovarian cancers.

It is a fact at the moment that many cancer screening procedures either are not available or not practical or acceptable. In these, reliance must be placed upon the recognition of symptoms such as warning signals that might connote the presence of cancer of one type or another.

For the medically trained specialists, the identification of an individual with symptoms or with signs that might suggest the presence of cancer places the individual into the more usual clinical setting of a differential diagnosis. Here enters history assessment, physical examination with the aid of endoscopy, radiological automated machines, cytological biochemical data and even a surgical operation.

In order to make medical care truly available to all our people, important changes will be necessary in the organization and financing of medical care topics that are in the area of public political debate. However, we now accept that a practice that is gaining acceptance is that of permitting medical personnel other than medical doctors to perform many of the preventive and surveillance procedures.

The new dimensions should modify our approaches to cancer prevention as an important but limited approach to health maintenance. We must also engage in the difficult time-consuming analyses of cost and effectiveness of the procedures we so much espouse.

Cost includes hazards and iatrogenic effects and effectiveness is not limited to mortality but encompasses quality of life, which goes hand in hand with quality of the 'pocket', the mind and social as well.

The obligations of the medical profession and its associates have become broader. These obligations can be fulfilled only by the participation of the properly informed public, not as passive recipients of services but as partners in the planning and implementation processes.

Education of the public in matters of health including the protection against cancer, must be kept current and continually reinforced. Others include better use of the public media particularly television, to influence public attitudes and behaviour towards a healthier lifestyle.

Further Reading:

- Cole P. Meletti F. Chemical agents and occupational cancer J. Environ pathol Toxicol 1980; 399-417.
- Doll R., Petro R. The causes of cancer, oxford University press 1981.
- Newell GR. Cancer prevention in clinical medicine. Raven, new York 1983; 257.

SOME RECOMMENDATIONS FOR PREVENTION AND EARLY DETECTION OF CANCER:

(i) Recommendation For Primary And Secondary Cancer Prevention For The Medical Personnel:

During the cancer awareness week, it is expected that the medical personnel should focus on cancers which are known to have some clear features for prevention. The following cancers and suggestions are expected to form the bases of the theme of this year's KECANSA cancer week.

All Cancers

Avail salient information on cancers to the public. Arrange for professional education, dietary intervention, pap smear and mammography screening, prevention as regards HBV/HCV infection and faecal occult blood testing screening, siting key roles and limitations in cancer screening and prevention.

Lung Cancer

Current views hold that some general points are important. Such include vitamin rich diet including fruits and vegetables. However, there are no data unambiguously showing that vitamin supplements reduce risk, and insufficient evidence that screening for lung cancer is

effective. Additional research is needed particularly on the effectiveness of CT scan in high risk individuals. Tobacco control was identified as deserving UICC's highest action priority.

Colorectal Cancer

Lifelong body size control and physical activity; regular and lifelong consumption of fruits and vegetables; diet low in animal fat, high in cereal fibres; implementation of well-organised mass screening for colorectal cancer using faecal occult blood testing at least every two years in asymptomatic people over 50 years old, without familial risk.

Breast Cancer

Primary prevention: whether preventive agents can be recommended for particular risk groups remains unclear. *Secondary prevention:* mammography screening is the only well-established tool for reducing mortality from breast cancer through early detection; other modalities, such as MRI and ultrasound may be useful for particular subgroups of women.

Prostate Cancer

Early detection, particularly by prostate specific antigen (PSA) screening may reduce mortality; therefore there should be dissemination of information about early prostate cancer detection. There are no known effective interventions to prevent prostate cancer; further research on diet, chemoprevention and genetic factors is particularly needed.

Cervical Cancer

This is one form of cancer where a lot can be done in terms of prevention and early detection through organised screening programmes using pap smear, while the development of protective vaccines should be a high research priority in the current research endeavours.

Stomach Cancer

Primary prevention: Possible areas of target include: Education programmes directed towards modification of diet; improvement of living and sanitary conditions as well as treatment and monitoring for the eradication of Helicobacter pylori infection.

Secondary prevention: Not recommended for most places, due to its high cost and the very low cost/benefit ratio. Each country should evaluate the pertinence of radiographic and endoscopic studies for early diagnosis, based on the prevalence of the disease, the acceptance of the procedures by the population, its cost and impact.

Liver Cancer

Current knowledge shows that a large number can be prevented by acting on prevention of Hepatitis B virus and Hepatitis C virus infections; avoidance of excessive alcohol drinking, and of contamination by aflatoxin B1. Screening of liver cancer by ultrasound and tumour markers (alpha-fetoprotein) may be effective in high risk subject where HBV/HCV infection and liver cancer are common and medical resources are available.

(ii) Recommendation For Less Or Non-Medically Oriented People:

- Medically trained persons have ways of detecting cancer in suspected cases. However, and more often than not, a cancer will have had serious effects on the body by the time it is obvious to detect, even to the medically oriented.
- All other individuals should therefore have some information on early detection of cancers particularly in the following special sites; breast, upper gastrointestinal tract, cervix, lung, lymphoma, skin, colon, rectum and larynx.
- Not all cancers present or show in the same manner but a majority do and it is in these that self-questionnaires would be of help.
- Few seemingly 'well' people go for health examination to be performed by medically trained doctors.
- The current distribution of medical personnel leaves rural areas and under-privileged slum dwellers with low physician-to-patient ratio which makes the detection of a symptomatic early cancer a lesser priority, even a luxury.
- There is convincing evidence that early detection and prompt treatment are directly responsible for cure or long survival in many types of cancers. Examples:
 - (i) In lung cancer early detection is at present the only hope of altering the extremely poor outcome. Early detection has considerable effect on the survival rate in early breast and colon cancers.
 - (ii) In cancer of the uterine cervix early detection results in reduction of mortality and decrease in the number of invasive cancer by prompt treatment of cancer in situ.

The warning signs of cancer include:

- Thickening (growing) or lump in breast or elsewhere (armpit, neck, groin).
- Indigestion or difficulty in swallowing.
- Nagging cough or hoarseness of voice.
- Unusual bleeding or discharge.
- A sore that does not heal.
- Change in bowel or bladder habits.
- Persistent severe pain.

In addition, unexpected loss of weight in the absence of intent or of recognisable cause could be related to a serious disease process and deserves immediate review by a medical doctor.

Awareness of a new lesion or change in an existing one is the only requirement for self-examination of the skin and early detection of melanoma, basal cell carcinoma and squamous cell carcinoma.

Preventable Factors:

- Some causative factors have been defined or suspected for the more important site of cancer. The avoidance of such factors obviously prevents or reduces significantly occurrence of such cancers.
- The most defined situations are the habits of tobacco smoking and heavy alcohol consumption.

Contracting hepatitis (liver infection by viruses) is an important factor in our environment as well.

- Smoking of tobacco especially in form of cigarette is the cause of the pandemic of lung cancer. Tobacco smoking is also involved in many cancers of the oral cavity, oesophagus, larynx and urinary bladder.
- Alcoholism is a common drug of addiction with several consequences that add many dangers to health. Alcoholism is often combined with nutritional deficits and is a defined factor in increased risk to cancer of oral cavity, oesophagus, larynx, liver and possibly pancreas.
- Infection by viruses particularly Hepatitis B virus and Hepatitis C virus leading to hepatitis are defined causes of liver cancer. Other common cancers that have arisen in the backdrop of HIV (Human Immunodeficiency Virus) infection include:
 - Kaposi's sarcoma (with marked skin manifestations)
 - Cancer of the conjunctiva
 - Lymphoma - (Non-Hodgkin's Lymphoma).
 - Uterine Cervix cancer

It is the duty of everyone to do the utmost to avoid these habits and get good instruction to avoid the situations associated with causation of cancer.