

# THE ROLE OF EDUCATION IN CANCER CONTROL

Pages with reference to book, From 196 To 198

Knowledge of the etiological factors associated with cancer is relatively recent. It has mostly come in the last three decades. Earlier, cancer was justifiably considered a hopeless disease with very little one could do to cure it and the possibility of preventing it was not even discussed. Things have changed dramatically. For the first time the word "Prevention" is being used with cancer. The present knowledge is still insufficient, so we cannot talk of preventing all forms of cancer, but at least we can talk about primary prevention of some of the common cancers which affect human beings. For a much larger group of cancers we can now talk about early detection (secondary prevention) and the possibility of complete cure. Unfortunately, the available information about primary and secondary prevention of cancer has not been utilized to the full. The translation of this knowledge into action leading to benefits to the individual and country has not yet taken place. The major reason for this is lack of information at both the professional and the public level.

## SCIENTIFIC BASIS OF PRIMARY PREVENTION

The concept of primary prevention of cancer has emerged from the knowledge that 80% of all human cancers are environmentally determined<sup>1</sup>. The evidence for this has come from results of numerous epidemiological studies throughout the world. Broadly speaking the evidence is based on (a) case control studies, (b) changing trends in the pattern of cancer with time and (c) migrant studies. The conclusions of epidemiological studies have also been confirmed by experimental work. Once the environmental agent or agents (initiators as well as promoters) associated with a specific tumour are identified by studies, steps can then be taken to (a) eliminate the particular agent/agents from the environment or (b) if total elimination is not possible, then reduce the levels of exposure or the dose. By eliminating the initiator/initiators from the environment the start of the carcinogenic process can be stopped. By eliminating promoters, carcinogenesis can be arrested at the first stage of initiation. By reducing the levels of initiators and promoters in the environment carcinogenesis is not stopped, but the time span between initiation and clinical manifestations is lengthened. In most cases this interval is anywhere between 15-30 years and if this can be increased by another 15 or 20 years, the age group in which these cancers will clinically manifest will be later. According to currently available knowledge primary prevention of the following cancers is possible.

Lung, oral cavity and pharynx Liver

## SCIENTIFIC BASIS OF SECONDARY PREVENTION

Where the process of carcinogenesis cannot be stopped, early detection of cancer can help in better and more definitive treatment. Improved methods of detecting cancer at an early stage when it is still confined to the tissue of origin is being made possible by advances in cytology, serology and imaging techniques.

The greatest success story of secondary prevention is that of Carcinoma of the Cervix. Cytological examination has made it possible to detect carcinoma cervix at an early stage where simple surgical procedures can remove it completely. The mortality rate of carcinoma cervix has thus been drastically reduced, although the total number of new cases are not much different.

## **INFORMATION AND EDUCATION PROGRAMMES**

Conveying this information to the people and making them act on it is a difficult task. The task is, however, made easier since most of what is advised for cancer prevention is the same as advised for prevention of diseases of the heart, lungs - as a matter of fact for good health in general. This way the educational programme for cancer control becomes a part and parcel of the Health Education programme in the country. This will provide the Cancer group with expertise of those already in this field and also save considerable expenses. Educational and informational programmes about cancer have to be designed with care keeping in mind such variables as:

- 1) What is the frequency of the different malignant tumours in the community?
- 2) Which cancers have to be given the priority?
- 3) What are the target groups for each of the selected cancers?
- 4) What is the educational level of each target group?
- 5) What educational programmes - health education, adult education, schools and colleges exist in the community?
- 6) What channels of information are available? and
- 7) What are the social and cultural practices which influence health?

Keeping the above variables an outline of the different steps required for a national programme of information and education for cancer control is given below.

**1) Identification of the common malignant tumours in the country:** This will determine the priorities of the programme and also where the greatest benefits are likely to occur. The determination of the sites which are considered high priority will in turn determine the type of cancer control programme required - Primary vs Secondary Prevention.

### **2) Identification of the Target groups for each cancer selected for action**

The strategy for control of each cancer is different. For some the major etiological causes are known and primary prevention is possible. For others secondary prevention or early diagnosis is all that is possible at the moment. The target population that has to be addressed, thus, differs for each cancer. The following examples will clarify these statements.

#### **Example 1: Carcinoma bronchus, mouth, pharynx and larynx:**

Together these cancers constitute the bulk of cancers amongst the males in this country. If all those using tobacco in any form could be persuaded to give up their habit then almost all cases of Carcinomas of the above sites can be prevented from occurring. The target groups which need to be approached for appropriate action are:

- a) Legislators, Politicians and Government officials. This requires steps to discourage the cultivation and manufacture of tobacco products.
- b) Farmers- In areas where tobacco is grown the farmers have to be persuaded and encouraged to find substitute crops of equal economic value.
- c) Traders and Industrialists- Those involved in the manufacture and sale of tobacco products have to be persuaded to find alternative business.
- d) Opinion makers — This category includes religious and social leaders, journalists, leading sportsmen and experts in mass communication (advertising, radio and T.V.).
- e) School children- The most effective age group for intervention are the school children since this is when many start the tobacco habit.
- f) Tobacco users to give up the habit.
- g) Society as a whole - Make tobacco usage an anti social practice.

#### **Example 2: Carcinoma breast and cervix: +**

Together these two sites are amongst the commonest cancers of the females in Pakistan. The etiological causes of these two cancers are not well established so that Primary prevention is not possible. Early

detection (Secondary prevention) is possible and very effective in lowering the mortality. The target groups for a cancer control programme for these two sites will be as follows:

a) Ministry of Health

i. To establish early detection facilities. For breast, this will be Mammography and for cervix colposcopy and cytology services.

ii. to provide a backup of treatment facilities for cases detected early. The provision of adequate treatment facilities is of the highest importance in any early detection programme. If these facilities are not available to the patients within reasonable access the programme can backfire and become counter productive. There is no point in detecting a case early if it cannot be treated early.

b) The high risk groups- the success of the programme will depend on how many of the high risk women can be persuaded to utilize the early detection facilities in time, that is before symptoms have developed. The approach to this group has components of both information (importance of early detection and available facilities) plus education (how to perform breast self examination).

c) Members of the Health team- physicians, nurses, community health workers all have to be kept informed of recent developments in the field and the importance of screening of non symptomatic individuals. They also have to know what are the available facilities and how to utilize them.

### **3. PREPARING MATERIAL FOR EACH TARGET GROUP**

The approach and material for each target group has to be planned keeping in mind what action/s we wish them to take. If the target groups are the politicians and legislators we want collective action. If the target groups are opinion makers, tobacco farmers and/or tobacco users, the programme is seeking individual action. Groups like politicians, legislators, opinion makers and social leaders require accurate upto date information about that particular cancer and how it can be controlled by the actions that they are being asked to take. They are busy people and the material for them should be in a concise presentable format that will catch their immediate attention. On the other hand school children and tobacco users need an educational approach which will modify their behaviour. The educational level of the target group also has to be kept in mind when preparing the programme and the material. The educated may be best approached by reading material, while the electronic media is perhaps the best way of reaching the illiterate in the lower socioeconomic class. Considering that the majority of the high risk patients as in Carcinoma Cervix or the majority of tobacco users are in this group it becomes an important aspect to keep in mind. As the preparation of information and educational programme is so diverse and complex it is vital that the help of professionals in the fields of communication and education is taken. These will include experts in the advertising field, journalists, radio and TV commentators and educationists including health educationists. The help of these experts is needed from the very beginning. Once the target groups are identified they can help in selecting the most appropriate medium (written, posters, films etc.) and then help in preparing the material. They can also help in identifying the existing programmes both formal, like schools and others, like, adult education present in the community and integrating with them. As stated earlier integrating or riding piggy back with established programmes will save costs and have a much better chance of success than a completely separate programme on cancer.

### **4. PUTTING THE PLAN INTO ACTION**

The phasing of the programme will depend upon what are the priorities and what help is available, which includes finances and the professionals mentioned above. Thus, if there is a good ongoing programme on Health Education joining that would be the best way to start a cancer control programme. If the school system is good and covers nearly all children then inclusion of desired information on cancer in the school curriculum should be high on the list of actions. Irrespective of what else is on the programme highest priority should be given to education of the Health professionals. Starting with the curriculum of the undergraduate medical colleges it should cover the training of nurses, other health workers, postgraduate medical trainees and continuing education programmes. Without an informed and committed health team a programme on cancer control cannot

succeed. The present undergraduate medical curriculum is heavily weighed towards treatment. secondary prevention gets some attention but there is almost nothing on primary prevention. It is immaterial who teaches it or when it is taught but the curriculum must cover the following points:

- a) The common malignant tumours in the community.
- b) The etiological factors associated with the common tumours.
- c) The early symptoms of malignant tumours.
- d) Methods of diagnosis with emphasis on facilities available locally.
- e) The importance of early detection.
- f) Measures for the Primary Prevention of the commonly occurring malignant tumours.

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## **REFERENCE**

1. Doll, R. Strategy for detection of Cancer hazards in man. *Nature*, 1977; 265: 589-596.