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THE PROBLEM IN THE REGION AND THE ROAD AHEAD

by

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1. The magnitude of the problem

In these days of atoms and space conquest, cancer is still man's greatest challenge. To him it is a matter of life or death; unfortunately too often, of death alone. Even in developing countries it has come to claim a place as a priority public health problem, although overshadowed by apparently more acute ones. It has now reached proportions in nearly every country of the Region which have assumed national importance.

It may be argued by some health authorities that malnutrition, endemic diseases and high infant mortality are the most urgent health problems as they affect a larger proportion of the population, but this fact in itself does not make cancer an unimportant health problem in the Region. There is simply no sound statistical basis for this, and any comparatively lower frequency is compensated by the seriousness of the problem. Moreover, the biologic front is never static. As soon as acute problems are solved, such diseases as cancer and cardiovascular diseases will come to the forefront. Judging from the history of public health in the more advanced countries of Europe and America from the turn of the century, when during the first half only cancer changed ranks from the eighth to the second cause of death, and taking into consideration the rapid scientific advances, and the vigorous control programmes undertaken by the Governments of the Region, the day will not be far when infectious and parasitic diseases will diminish in importance to be replaced by diseases like cancer which are more serious. It is not too early to develop programmes to face that day.

It is a well-known fact that our chances of getting cancer increase as we grow older, and no one can study demographic data without having his attention attracted by the fact that cancer mortality in different countries is in striking proportion to the expectation of life and crude death rate, directly to the former and inversely to the latter. Thus it may be expected that countries of the Region with populations of a younger age structure will

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have less than their share of cancer cases. Yet, there is still the possibility that cancer may develop at a younger age in these countries as indeed in other developing countries, which may compensate for the lack of longevity. This earlier inception of cancer may be attributed to some factors of environmental origin; highly potent carcinogens, environmentally induced somatic mutations operating at an early stage of life or premature ageing (physiological age). A proof of this early development of cancer was erroneously sought by comparing the age distribution of cancer in different countries. However, a shift towards earlier decades would be expected in any population of younger composition. For the comparison to be valid, age specific rates should be used. The same factors may not only hasten the inception of cancer, but may also increase the incidence. A much more potent carcinogenic stimulus is required to shorten the incubation period of cancer than is necessary to increase the incidence.

That cancer may occur at an earlier age is not the only disheartening phenomenon.

(a) Many prevailing tumours are usually of the types that are difficult to deal with and have poor prognosis (bladder in Egypt, some areas of the Sudan and Iraq; oesophagus in some areas of Iran; head and neck tumours in Iraq; nasopharynx in the Sudan, Iraq, and Tunisia; liver in Africa; acute inflammatory carcinoma of breast in Tunisia; and lymphomas in all countries of the region).

(b) They are usually bigger and more advanced when first detected.

(c) The approach to the patient is more difficult; has a marked antipathy against active treatment, especially surgery and usually acquires a fatalistic attitude towards the problem.

(d) The medical facilities are less adequate to face a progressively growing problem.

This calls for some modification in the cancer control system.

2. Cancer control in the Region

It is recommended that every country in the Region should have a cancer control programme of a suitable size, planned and carried out within the structure of the government health services. This programme will vary according to the system of government, the status of health services, the distribution and density of the population, the geographical factors, the availability of medical personnel, equipment and funds. This programme should be prepared by a central planning body which establishes policy, sets standards, implements operations, co-ordinates efforts in all fields of cancer control and integrates cancer control measures with the work of other health services and voluntary agencies. The government

programme should include all aspects of cancer control : prevention, early detection, clinical services, after-care, rehabilitation, public and professional education and research. The aim is to reduce significantly the number of new cases, increase the number of cures and reduce disability due to cancer.

2.1 Registration and statistics

It is evident that cancer registration supplemented if necessary with ad hoc surveys is the first step of any control programme. Apart from the fact that a cancer register may be used as a reference for providing medical and social care, it is the basis of all epidemiological studies. It provides essential knowledge about the magnitude of the problem, and the diversity of its aspects. It is an essential tool for planning, execution and evaluation of a cancer programme. Evidently the difficulties in maintaining a comprehensive cancer registry in developing countries are great, but there is no reason why it should not be carried out on a localised basis, in areas where reasonably adequate diagnosis and treatment facilities are available, and for certain high risk groups. An example of the latter is the cancer registry in the Caspian littoral area in Iran in connection with carcinoma of the oesophagus.

2.2 Prevention of cancer

The prevailing tumours in developing countries are obviously connected with some environmental factors. Prevention of these factors, whether in the form of parasitic diseases, local customs, or nutritional factors may prove a difficult task, but it is the most promising approach. These measures may be successful even without complete understanding of the mechanism of the carcinogenesis. However, studies of geographic differences in the distribution of malignant tumours and their relation to some local aetiological factors have opened up new roads for the practical application of preventive measures.

2.3 Early detection (secondary prevention)

The prevention of premature death, disability, or other sequelae through finding cases and pre-cancerous conditions early and treating them promptly is the keynote in cancer control.

The value of "cancer detection clinics" for periodic physical examination of apparently symptomless persons is still under discussion especially for developing countries. Apart from the fact that it needs a certain level of enlightenment of the population and the cost may be beyond the resources of many countries of the Region, it requires a sufficient number of physicians well trained in the detection of early cancer, otherwise they may convey a sense of false security to the

patient. A more practical approach although with some diversion from the original idea of cancer detection in "symptomless persons", cancer detection can be integrated with these services already in operation with slight modification. This may prove even more important than the original objective. Thus, tuberculosis dispensaries and mass radiology surveys should be directed also towards detection of pulmonary mediastinal tumours. Schistosomiasis mass treatment campaigns should detect early bladder cancer by cytologic and cytoscopic methods. Blood laboratories originally established for eradication of malaria and control of other blood parasites, should extend their activities towards diagnosis of leukaemia. In the absence of mass screening for cancer of the cervix, this could be profitably introduced into the ante- and post-natal clinics, and integrated with the family planning projects undertaken by almost every country in the Region. This practice is projected both in Iran and Tunisia.

2.4 Clinical services

Clinical services (diagnosis and treatment) should enjoy a high priority in a cancer control programme, as it appears unreasonable to detect cancer patients if there are no facilities to cure them. However, this is no argument against early diagnosis bacause even a limited service can deal more efficiently with early curable than with advanced incurable cases.

The size of clinical services will depend among other things on the number of cases expected to be detected every year. In the absence of proper national statistics, this can be calculated in an approximate way if we know the age structure of the population at risk, as follows:

age groups	cancer incidence
under 15	0.10%
15 - 50	2%
over 50	9%

The difficult question of centralization or decentralization arises as it is related to such aspects as early detection, follow-up and after care. Special attention has to be given to the availability of personnel, facilities and funds as well as to distance and transport.

2.5 After-care and rehabilitation

Perhaps more than any other, a cancer patient necessitates careful planning and systematic after-care.. Even after successful treatment, he may have some incapacities, both physical and psychological. The impact of these is more prominent as cancer strikes usually at a mature age, when a man is most useful to his country and indispensable to his

family. These incapacities ought to be managed by social and psychological adjustment, vocational training, the use of appropriate prothesis, health education, etc.

2.6 Terminal and advanced cases

It is expected that a high percentage of cancer sufferers in developing countries would be present to whom no further treatment can be given and if given cannot cure. These patients should not be left to themselves. It is essential that the maximum care should be given. The busy general hospital ward is not the right place for them, apart from the fact that ward beds have to be freed for those requiring more active treatment. Home care is the best alternative, assisted if necessary by a home nursing service. Such patients are happier when surrounded by their families during their ordeal. A visiting nurse can carry out after treatment, train a close relative (a wife or a daughter) to carry out simple repetitive procedures. She can also keep a record of the progress of the case and ensure that the patient attends hospital for examination and further treatment if necessary. She can investigate the domestic conditions of the patient, and give advice on how to improve health and general living conditions, and raise the morale of the patient and his family. The relatives are the best nurses, but they need guidance and support. However, the socio-economic conditions may raise some difficulties, and for many home care is quite impossible. They would need to be nursed in establishments which should keep the home atmosphere as far as possible without the routing or discipline of a hospital. These should not be established as separate entities, but should care for other chronically ill and aged patients suffering from other diseases, otherwise they will be stamped as "homes for the dying" or "homes for incurables" with catastrophic psychological impact on the patient.

2.7 Professional education and training

Satisfactory cancer control requires the presence of comprehensive teams of clinicians, radiologists, pathologists (including cytopathologists), epidemiologists, statisticians, public health officers, nurses, technicians, health education specialists, and other allied personnel. It is generally agreed, that there is still a shortage of medical and paramedical skills at the various levels and disciplines of oncology and so, professional education is very much a live problem, perhaps at the core of the whole fight against cancer. Lack of trained personnel is the most acute problem of cancer control in the Region, and training is the one contribution of WHO that would give the best return.

2.8 Research

Cancer research is a requisite for developing countries. They cannot depend entirely on the results obtained in more advanced countries as the problems, factors and circumstances may be different. Admittedly there may be a lack of sophisticated basic research undertaken by highly specialised institutions, but there should be emphasis on epidemiological surveys and statistical studies of population groups to devise preventive measures.

2.9 Public education

Little can be achieved in the two practical steps in cancer control (prevention of the preventable, and early diagnosis and treatment of cancer or precancerous conditions) without the enlightened co-operation of the public. The goal of a cancer education programme is to alert but not to alarm the public, and it should predispose persons to rational effective action upon detection of symptoms. It should deal with the areas of ignorance, fear and pessimism which are the main obstacles to useful action. Methods of cancer education must be adapted to the population and may vary according to the level of general education, and to the cognitive and emotional attitude of the different population groups.

2.10 The role of Governments, Cancer Institutes and Voluntary Organizations in Cancer Control

Three types of institutions are essential components for a national anti-cancer effort; governments, institutes working in the field of cancer and voluntary organizations. It is on the combined co-ordinated efforts of this triad that success in the fight against cancer depends.

Government health authorities are the responsible body for the whole cancer control programme, assisted in its execution by the two other components of the triad.

Institutes working in the field of cancer may take the shape of a "Cancer Institute" or "Cancer Clinics" in universities or general hospitals, where the surgical, radiology and pathology departments combine their efforts in clinical services and research.

The control of cancer is not confined to diagnosis and treatment, but includes all measures available to reduce the impact of the disease on the patient, his family and the community as a whole. In this, voluntary organizations can play a major role. They can sponsor a

programme of social aid to needy patients and their families. Medical and social rehabilitation can be a major task of these organizations as well as public education. In some countries a voluntary effort was the initiator of interest in cancer control, demonstrating the desirability and feasibility of a control programme before it was incorporated within the structure of government health services. They were also instrumental in supporting clinical services, professional education and research. Liaison between the institutions involved in cancer work and voluntary organizations is essential, if the patient is to enjoy an uninterrupted spectrum of medical and social care.

3. Regional co-operation in the field of cancer control and research

Regional co-operation in the field of cancer control and research is not only desirable but also essential due to the magnitude and acuteness of the problems as compared to the limited potential in each individual country, whether in the form of manpower, materials or finance. This co-operation is, fortunately, both possible and convenient as most of the health problems are regional in distribution. Cancer, like other diseases, does not respect national frontiers.

This co-operation may take the form of exchange of personnel, the establishment of regional training centres like the WHO regional training centre for cytopathologists in Teheran, and regional research projects. Regional co-operation in cancer research is essential, not only to prevent duplication of effort, but because the study of the different patterns in our populations may throw light on the basic problem of carcinogenesis. The study of these differences and their possible relation to environmental factors may present unique opportunities for further exploration of the causes of cancer, a knowledge of which may be essential for prevention and treatment. This is a contribution for which our countries are well suited and may be of great benefit even to advanced countries. Another field of co-operation is in certain investigations which need populations sufficiently large to get results of statistical significance.

Such joint studies, either by comparing epidemiological findings or the pooling of data, need the establishment of accurate statistical procedures, as well as uniformity in histological definitions and nomenclature. Investigation of therapy (therapeutic studies), is an important aspect of cancer research in the countries of the Region, as the response of their spectrum of tumours may be modified by the advanced stages of the disease usually encountered or by other pathological conditions, associated or causative.

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