

THE PREVENTION OF CANCER — A PRUDENT APPROACH

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SING MED J. 1988; 29:196

The prevention of disease, though compelling in concept, is often hampered by the lack of vital knowledge. This is especially true in the field of cancer, where the aetiologies are often multifactorial and the prevention fraught with difficulties and uncertainties.

Lung cancer is well recognized in much of the developed world as the number one cancer. Even in Singapore, it is the most frequent primary site - an average of 490 male cases a year (24% of all sites) and 180 female cases (11% of all sites). The actual incidence rate is about 42 per 100 000 in males and 16 in females, and the rates are increasing at about 2% per annum. From various case-control and cohort studies, it is generally accepted that 80 - 85% of lung cancer deaths in males below 65 years of age can be attributed to cigarette smoking. Knowing the fact is one thing, but how do we then control the problem? How do we prevent young people from picking up the habit? How do we help smokers to quit the habit? These socio-behavioural problems are, unfortunately, less easy to solve. There is an urgent need for more research in this area as we seek our utmost to establish a nation of non-smokers.

Besides seeking to control the smoking problem, there are other complementary approaches. In our armamentarium of preventive strategies, it is intuitively appealing if something can be applied, injected or ingested to "protect" oneself against disease. The success of vaccination programmes is a good example. In cancer prevention, the search for inhibitors should be as vigorous as that for initiators and promoters. If a substance, preferably natural, can be found to reduce cancer incidence, even for just one particular site, then preventive oncology will have taken a major step forward.

Dietary factors in cancer causation or prevention have been the subject of growing research interest in the last three decades. Bjelke was among the first in recent history to draw attention to the likely role of sources of

vitamin A, including vegetables, as protective foods against lung cancer.(1) MacLennan et al, in a case-control study on lung cancer in Chinese females in Singapore, also pointed to the inverse relationship between intake of green leafy vegetables and lung cancer risk.(2) It is as yet unclear if the agent involved is β -carotene (provitamin A) or vitamin A (retinol) itself, or even other constituents of these foods. Whatever the active compounds, however, fruits and vegetables do appear to be protective not only against lung cancer but other cancers involving epithelial cells such as those of the larynx, oesophagus, stomach, large bowel and bladder.

The report from Hong Kong, based only on 50 pairs of subjects, is not conclusive but supportive of the fruit and vegetable - protection hypothesis. It is timely that such a paper should be published as we begin to look at cancer control from a more pragmatic angle. Diseases can be controlled before there is much understanding about the agents and mechanisms involved. Research on carcinogenesis must continue, but while waiting for the results, let us think in terms of reasonable and prudent steps which could be health-protecting. Since latent periods are very long, the results will only show up in one or two decades from now. In the meantime, medical practitioners can confidently educate our patients and the public at large on two key messages:

- (1) Don't smoke.
- (2) Include fruits and vegetables in the daily diet.

We cannot go wrong in this worthwhile endeavour.

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