

Editorial

CANCER EPIDEMIOLOGY IN INDIA

According to WHO estimates, globally 10 millions new cancer cases are diagnosed each year. It is estimated that by the year 2020, there will be 20 million new cancer cases with 12 millions deaths. Even though high incidence of cancer is reported from developed countries (North America, Europe, Japan and Australia) developing countries bear half of the global cancer burden as 75% of the world's population lives in these countries. This proportion is likely to increase further in the next twenty years because of population growth, increase in the longevity, urbanization/industrialization, changing dietary habits, better control of infections and increase in tobacco consumption in these poor countries.

Currently, In India 0.8 million new cancer cases are diagnosed each year; 3 million cases are present at any time. The National Cancer Registry Programme (NCRP) under Indian Council of Medical Research, (ICMR) was initiated in 1981 and has provided useful information about Cancer Epidemiology in India.¹ Presently, there are five urban population based (Ahmedabad, Chennai, Bangalore, Mumbai and Delhi) and three rural population based cancer registries at Barshi, Karunagapally and Ambillikai. The last two rural based cancer registry have been added recently. These registries have provided data on the incidence of different types of cancer, their patterns and varieties in that region. In general incidence of cancer is low in Barshi compared to those seen in Urban region. The common Cancers in males in India are lung, stomach, esophagus, hypopharynx and larynx. In females-cervix, breast, oral cavity, esophagus, and ovary are common cancers in order of frequency. There is variation in the frequency of these cancers in various registries. For example-lung is the leading site in Delhi, Mumbai and Bhopal. Stomach is the commonest cancer among males in Chennai and Bangalore. Cancer of esophagus is the second common cancer seen in males in Mumbai, Bangalore, and Barshi. Similarly, among females-breast is the commonest cancer in Mumbai and Delhi, while cervix is the most common cancer in the remaining registries. Cancer of the gall bladder

is common in Delhi (4th Common cancer in Delhi women, age adjusted incidence being 8.9%, one of the highest in world) and in Bhopal (2.5%). The reasons for such a high incidence (apart from high incidence of gall stones in North India) are not clear at present. It will be interesting to see the results of currently ongoing case controlled study. Another related observation is high proportion of intrahepatic cholangiocarcinoma, 46% and 39% of all liver tumours in females in Bhopal and Delhi respectively. Variations have also been observed in the frequency of various sub-sites in head and neck region depending upon the method and forms of tobacco used. Among children (0-14 years) leukemia and lymphomas are the most common cancers (almost 50%) followed by CNS tumours. Differences have also been observed in the frequency of various types of leukemias/lymphomas/myeloma seen in India compared to West.

Globally, about one third of cancers are related to tobacco products, both smoked and chewed. Tobacco related cancers include-oral cavity, oro-pharynx and hypopharynx, larynx, esophagus, lung and urinary bladder (In India, about 50% of cancers in males and 20% of cancers in females are related to the use of tobacco). In another one third, there is clear relationship to diet. These include-colon, breast, stomach, esophagus, and liver. Infection is related to another 1.5 million cancer cases globally. These include cancer of cervix, liver, nasopharynx, stomach etc.²

Thus spectrum of cancer epidemiology seen in India is different than that seen in any developed country. Even in India, unique differences are noted in the frequency of various cancers suggesting role of diet and environmental factors. As we gear up for more of industrialization/urbanization and with our changing dietary habits, the frequency of many cancers may change in future.

REFERENCES:

1. National Cancer Registry Programme. Consolidated report of the population based cancer registries 1990-1996. Indian council of Medical Research, New Delhi.
2. Sikora K. The impact of future technology on cancer care. *Clinical Medicine* 2002;2:560-568.