
Increased migration is a reality in the world and migration has social, cultural, political and economic consequences impacting the health of migrant communities. Studying the impact of migration on health in general, on cancer and other chronic diseases in particular, can offer important information on the role of environmental and ethnic factors in disease aetiology. Although there are some difficulties in differentiating the influences of environmental risk factors from those of genetic racial factors, the information can be used to develop aetiological studies and cancer control interventions. Studies on cancer incidence rates among Japanese in Japan and Japanese and Caucasians in the US revealed that the risks of cancers of the prostate, corpus uteri, colon, thyroid, breast, ovary and testis among the Japanese migrants and their descendants were elevated, whereas those of the stomach, oesophagus and cervix uteri were decreased among them in the US as compared with the Japanese in Japan. Although there have been past studies among Hispanics,\textsuperscript{2} Japanese,\textsuperscript{1,3} Chinese, Filipino, Vietnamese, Korean ethnicities\textsuperscript{3} and European migrants\textsuperscript{4} in the US, cancer incidence among Asian Indians living in other countries has not been widely studied. The article by Rastogi and colleagues\textsuperscript{5} describing the cancer profile among Indians in India and persons of Indian origin in Singapore, UK and the US is an important addition to the literature on changing cancer risks and patterns among migrants.

Rastogi and colleagues used the GLOBOCAN estimates for India for 1993–1997 and cancer incidence data from the Singapore Cancer Registry for 1993–97; the data for 1999–2001 for the UK were derived from the National Cancer Intelligence Centre (NCIC) and that for the US from Surveillance, Epidemiology and End Results (SEER) programme for 1999–2001. Thus the comparison periods used are different, which is basically due to the non-availability of reliable data for corresponding periods. In spite of the data limitations due to the possible discrepancies in the completeness of the counts of cancer cases and the population estimates for South Asian Indians in the UK and US and use of estimated data for Indians in India, the findings are consistent with existing knowledge about the importance of potentially modifiable environmental and behavioural determinants of cancer risk. The comparison brings forth the importance of cancer registration, early detection programmes, development and access to health services and health care coverage in cancer control and prevention. The higher rates of prostate,
colorectal and lung cancers among men and of breast, colorectal and corpus uteri cancers among women of Asian Indian origin in the UK and the US and the higher stomach cancer rates among the Singapore Indians reflect the effect of the migrant populations adapting to the local dietary and other life style patterns. Migrant studies have shown that breast cancer risk increases in women who move from countries with low incidence rates to countries with high rates.

On the other hand, the high rates of cervix cancer among Indian women and of head and neck cancer among Indian men reflect the impact of lack of screening and the continuing high risk from the different types of tobacco habits prevalent in India, respectively (http://www.canceratlasindia.org/). Although under-diagnosis, due to inadequately developed cancer health services or due to the difficulties in accessing health care, may partially account for these low rates, the role of wide variations in prevailing life style factors, particularly related to dietary and physical activity patterns, should not be underestimated. The low rates for colorectal cancer in India are particularly striking. In contrast to several other developing countries, particularly China, a stable trend in lung cancer rates has been observed in Indian registries. The considerable scope for further in-depth epidemiological studies to unfold these differences is underscored.

India has made considerable investments in cancer control and cancer registration. Without these timely investments, cancer patterns and leads to cancer control in India would not be as evident as now. Although population-based registries under the National Cancer Registry Programme of India (NCRP) and other Indian institutions are important sources for India, these almost entirely cover urban populations, mostly in Southern and Western India. There is considerable lack of cancer data from central, northern and eastern regions of the country, as well as from rural areas. Data from the Barshi rural cancer registry indicate that the overall cancer incidence rate in rural India is likely to be much lower than the urban rates. India is a vast country with urban and rural populations having varied cultures, customs, habits, dietary patterns and socio-economic status in different regions of the country. The NCRP initiated a cancer atlas project using recent advances in information technology to obtain a more reliable overview of cancer patterns in different regions of India and this initiative has documented interesting similarities and differences in cancer patterns across the country (http://www.canceratlasindia.org/). The cancer atlas project has paved the way for initiating population-based cancer registration in previously under-covered regions such as eastern India.

As the authors point out, future comparisons between selected subgroups of populations in India (e.g. Chennai) and in other geographic regions of the world (e.g. Singapore Indians) and between different generations of migrants in different regions could bring out further interesting observations. Given the rapid socio-economic changes happening in India, and lack of effective interventions, it is quite likely that the cancer patterns observed in persons of Asian Indian origin in the US and UK may be observed in India in the near future. Control of tobacco-related cancers, preventing cervical neoplasia and controlling breast cancer will considerably lower the cancer burden in India in future and will bring the overall cancer rates even lower. While research has documented how to control tobacco-related cancers and cervical cancer, political commitment to allocate resources and to initiate and sustain effective interventions at the public health level is critical.

References