

Epidemiological research on cancers by cancer registries: A view point

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Dear Editor,

Analysis of the routine data on cancers in a cancer registry remains an essential component in understanding the epidemiology of cancers in limited resources setting. Routine data of cancer registry can be used for retrospective studies. However, short-term case-control study design should be taken up in a Hospital-based Cancer Registry (HBCR), which is also one of the specific objectives of HBCR's under the Indian Council of Medical Research. The overall age adjusted incidence rate (AAR) of cancers for male ranges from 180 to 270/100,000 populations and 160 to 190/100,000 population in females of Northeast India.^[1] The AAR of carcinoma of the esophagus in males is as high as 27-70/100,000 population in this region, and AAR of carcinoma gallbladder in females of Kamrup-Urban registry area is 14/100,000 populations, which is second to the highest (Chile) in the world.^[1] A high AAR is also seen for esophageal cancers in females and for gallbladder cancers in males of this region. This type of information obtained from Population-based Cancer Registries (PBCR) becomes the background to conduct hospital-based case-control studies. The relative proportion of tobacco-related cancers in this region is around 40-70% in males and 20-43% in females varying from one registry to another of Northeast India,^[1] which has been compounded by the habits of local betel nut, quid and areca nut consumption that is prevalent in our population, and fermented betel nut chewing habits has been demonstrated as a risk factor for esophageal cancer.^[2] Moreover, certain indigenous dietary habits of different ethnic groups of our population may be responsible for variations in the patterns of cancer in different ethnic groups of the state of Assam.^[3]

At this juncture, the high incidence of cancers which has been demonstrated by reports from different PBCR's of this region and also the state of Assam remains mostly unexplained. The high incidence rates of certain cancers cannot be solely explained by known or established risk factors. The population of South Asian region is of the same race, but still there is a marked variation of cancers from one region to the other. There are certain areas for epidemiological research in this part of the world

like, geographical regions where there are high levels of ground water arsenic and its compounds,^[4] exposure to pesticides through contaminated food sources due to unscientific and rampant use of organophosphorus pesticides, regions with pollution of the water sources by industrial effluents, and various indigenous food habits like the use of alkaloids in diet locally known as kalakhar (made out of dried and burned stalk of banana leaves) as a dietary risk for esophageal cancers needs to be further investigated.^[5] Whether all these are acting as lifestyle and/or environmental risk factors for cancers of the esophagus and gallbladder in this part of the world needs to be answered by epidemiological research. With an increase in the population size as well as increase in proportion of the elderly population the burden of cancers will rise and along with that a large proportion of our population will be afflicted by cancers of the esophagus and gallbladder. Cancers of the esophagus and gallbladder are fatal cancers and epidemiological research is a viable alternative for possible control and reducing deaths due to these cancers. It is time for cancer epidemiologists to work in liaison with specialist researchers from environmental sciences, geological sciences, and social scientists to establish such association if there is any. Moreover, the data on cancer that is currently available with different registries of this region can be materialized for such collaborative and joint research.

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References

1. Consolidated Report of Population Based Cancer Registries of India. 2009-2011. Bangalore: ICMR, NCDIR; 2013.
2. Phukan RK, Ali MS, Chetia CK, Mahanta J. Betel nut and tobacco chewing; potential risk factors of cancer of oesophagus in Assam, India. *Br J Cancer* 2001;85:661-7.
3. Krishnatreya M, Gogoi G, Sharma JD, Katakki AC. Patterns of cancer in select ethnic groups from Assam: A retrospective study. *Int Res J Soc Sci* 2014;3: 17-20.
4. Chetia M, Chatterjee S, Banerjee S, Nath MJ, Singh L, Srivastava RB, *et al.* Groundwater arsenic contamination in Brahmaputra river basin: A water quality assessment in Golaghat (Assam), India. *Environ Monit Assess* 2011; 173:371-85.
5. Phukan RK, Chetia CK, Ali MS, Mahanta J. Role of dietary habits in the development of esophageal cancer in Assam, the North-Eastern region of India. *Nutr Cancer* 2001;39:204-9.