



Determining Incidence of Childhood Cancer in Bihar

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Cancer incidence, which is provided by population-based cancer registries (PBCRs), is essential to understanding the trends in cancer burden and guiding effective control measures. A key feature of PBCRs is the use of multiple sources of information (hospitals, laboratories, death certificates) to identify maximum possible cases diagnosed among the residents of the registry area.¹ In contrast, hospital-based cancer registries (HBCRs) track detailed treatment and clinical data on patients seen at a specific facility regardless of residence, and help improve patient care and outcomes.

The published report by Bhagat et al² on the epidemiology of childhood cancer based on a 3-year review of a HBCR in Patna, Bihar, provides valuable cancer registry data from a geographic area, where till recently such data have been glaringly absent.³ They provide useful information on the distribution of childhood cancer by 5-year age groups, gender, and diagnostic groups. They further go on to calculate incidence rates and herein lies the problem. Their case ascertainment is only through one source, which is their HBCR. In the absence of data from any other hospitals (several other hospitals in Bihar treat children with cancer) and laboratories, which should further be complemented by examining death certificates through governmental agencies, their case ascertainment remains incomplete. Further, nearly half of the estimated new cancer cases in Bihar seek treatment outside the state and without efforts to capture these data, the incidence rates will be an underestimate.⁴ For these reasons, we believe that their intent to calculate incidence while desirable is incorrect.

Taking into account the above and recognizing that this is a relatively new HBCR with its first report on childhood cancer, it is remarkable to see that the age-standardized incidence rate of cancer in children aged 0 to 19 years in their analysis is 106.5 per million. This is close to the 119.4 per million recently reported from Chennai, which has HBCRs

and PBCRs for more than half a century and represents the most comprehensive and complete system of cancer case ascertainment in India.⁵ These results also contrast with the more modest incidence rate of 28.4 per million reported from the PBCR in Muzaffarpur in Bihar, a registry which has also been in existence for a similar time period as the one in Patna.³ In view of these inconsistencies, we recommend that their results of distribution of childhood cancer by 5-year age groups, gender, and diagnostic groups be considered valid, while those on incidence be considered less robust.

Till then, can we say what the incidence of childhood cancer is in Bihar? Till a couple of years ago, this question would have had no answer. Recent efforts provide a baseline of 28.4 per million, which is almost certainly an underestimate but also reflects the trajectory of a newly established PBCR.³ The true incidence rate is probably closer to the data from Chennai, as environmental exposures play a limited role in the occurrence of childhood cancer and incidence rates are expected to broadly remain similar.⁵ We hope that future updated data from efforts in Bihar would demonstrate this.

Conflict of Interest

None declared.

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