Editorial

Retinoblastoma: Poster-Child Tumor of the Low-Middle Income Countries (LMICs)!!!

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The adage that 'the place of one's birth dictates the outcome of one's cancer' chimes well in no cancer better than pediatric retinoblastoma. Survival outcomes of retinoblastoma (Rb) approaches 100% in high-income countries (HICs), whereas in low-middle income countries (LMICs), which harbor 80% of global retinoblastoma burden, the survival is strikingly dismal.[1] Late diagnosis due to cultural or socioeconomic barriers, lack of information at primary care level, poor referral to oncology units secondary to deficient health care system, lack of a retinoblastoma program with multidisciplinary approach, infrastructure and fragmented care are attributed to poor outcomes in a LMIC setting. Irony abounds as retinoblastoma is one of those rare pediatric tumors where implementation of a simple screening program can lead to both preservation of both globe and life.

In this issue, Tan RJD et al. from Northern Luzon in Philippines[2] report the profile and outcomes of 47 children (53 eyes) with RB, who were offered upfront surgical enucleation/exenteration due to lack of globe salvage options in the hospital. Extraocular RB patients received adjuvant chemotherapy. The mean age of diagnosis for unilateral RB was about 2 years and the mean delay in diagnosis from symptom onset was about 10 months. More than 50% of these patients had advanced disease and four/fifths of the eyes were enucleated. Overall survival among the whole cohort was around 50% and none among them with extra-ocular Rb survived.

Hazarika M et al. from India[3] report the outcomes of 189 RB patients from a tertiary cancer care center, where the median age of presentation was 14 months and the median time to reach the hospital from symptom onset was only 49 days. Two-third of the patients received computerized tomography(CT) for staging workup. Three-fourth of these patients had advanced intraocular disease, and a third had evidence of extraocular disease at presentation. One-fifth of RB refused treatment and an equal percentage underwent globe salvage. External beam RT and cryotherapy were the focal therapy modality mainly used for globe salvage in these patients.

RB affects children between a narrow age range and has a clear natural history, making it an ideal candidate for screening. Given that RB occurs at an age where routine visits to the pediatrician are more common and a definite relationship between early diagnosis and enhanced prognosis for eye salvage and patient survival, screening programs involving pediatricians and relevant members of the community (school teachers, community health workers) should be developed. Routine screening for red eye reflex in babies presenting to pediatricians is recommended by the American academy of pediatrics for early detection of Rb.[4] However, in a developing country scenario, Chantada et al suggested the key for eradication of extraocular Rb is related more to the possibility of a country's health care system granting egalitarian access to health care for young mothers and their children than any other specific action solely directed to the early detection of Rb in addition to awareness campaign.[5] At diagnosis, Tan RJD et al. report more than 50% of their patients with advanced disease[2] and Hazarika M et al. study had around one-third of the patient with extraocular disease.[3]

Refusal to therapy and poor compliance to prescribed treatment are other major issues that contribute to poor outcomes of Rb in a LMIC setting. Tan RJD et al. report 18% of their patient refusing treatment upfront.[1] Also, in developing countries, 50% of the Rb patients drop out during treatment and 20% of the intraocular patients die of disseminated disease due to refusal for enucleation of the eyes.[5] One of the reason for good compliance in high-income country setting may be due to legal system in health care. Such system may be lacking in a LMIC setting,

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which may contribute to refusal and lack of compliance to therapy. Developing local comprehensive supportive care programs relevant to sociocultural background is crucial to address this issue.

Tan RJD et al. in their study[2] reported lack of access to globe salvage techniques in their hospital leading to only option of enucleation of eyes for all Rb cases. Intraocular salvage techniques such as intravitreal therapy, ophthalmic artery chemoinfusions, plaque brachytherapy are not available in the majority of tertiary cancer centers in developing countries. In addition to continued training, skill development, adherence to principles of therapy at a pediatric oncology unit, focused health care policy to allocate adequate resources at a community level can significantly impact the eventual outcome in Rb in a LMIC setting.

Conflict of Interest
None declared.

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