EBioMedicine 63 (2021) 103199

Contents lists available at ScienceDirect

EBioMedicine

journal homepage: www.elsevier.com/locate/ebiom

Letter

Treating children with cancer in India - Navigating unique challenges

Sameer Bakhshi

Department of Medical Oncology, Dr. B.R.A. Institute Rotary Cancer Hospital, All India Institute of Medical Sciences, New Delhi, India

ARTICLE INFO

Article History:
Received 17 November 2020
Accepted 17 December 2020
Available online xxx

There remains a significant disparity in outcome amongst children with cancer in different parts of the world. I have worked as a physician scientist in India in the field of oncology for nearly two decades. Trying to understand and address this disparity has been a strong motivating factor throughout my career. The setting also provided me with unique research opportunities. My team observed that children with retinoblastoma commonly had poor compliance and often did not complete their entire therapeutic interventions [1]. Besides developing effective risk stratification of children with retinoblastoma, our team also focused on maintaining a complete database of all patients and we developed a telephone based follow-up system which has improved compliance for all children with cancer in our centre.

Indian healthcare is challenged by its resource constraints, especially for tertiary super speciality care which is restricted to a few large cities. In search of resource optimization, we explored the feasibility and safety of outpatient-based consolidation and induction therapy for acute myeloid leukaemia, which is traditionally administered as an inpatient procedure [2]. We also developed strategies for stringent outpatient follow-up of patients with febrile neutropenia and evaluated whether early stoppage of empirical antibiotics was a prudent strategy in patients with clinical improvement [3]. These innovative interventions have not only reduced costs but also helped to avoid nosocomial infections and iatrogenic complications.

Strengthening and optimizing supportive care with a multi-disciplinary team to improve outcome in children with cancer has always been an important focus for me. We have specifically focused on systematic evaluation for malnutrition, and proper nutrition counselling both before and during treatment, to address various cultural misconceptions about nutrition in our settings [4].

In the absence of strong financial support or health insurance, families in India often find cancer care financially prohibitive, which is especially true for second line or targeted therapies. Metronomic chemotherapy incorporates tandem use of preferably oral chemotherapeutic drugs at a biologically optimized dose with minimal side-effects. Our group has scientifically evaluated the role of low-cost oral metronomic chemotherapy for progressive cancers; [5], and this option is now being increasingly used as a maintenance therapy even in frontline settings of some cancers such as rhabdomyosarcoma.

The future of paediatric oncology in India seems promising. The Government of India has instituted a public health insurance scheme *'Ayushman Bharat'* which aims to provide for healthcare costs for the poorest of the population. Over the last 6 years, formation of the Indian Paediatric Oncology group has provided a platform for co-operative clinical trials in India. My experience of practising paediatric oncology in India has provided me with the lesson that, besides focusing on biology-related scientific questions, addressing country-specific challenges is a worthy endeavour.

Declaration of Competing Interest

Dr. Bakhshi has no conflicts of interest to disclose.

References

[1] Bakhshi S, Gupta S, Gogia V, Ravindranath Y. Compliance in retinoblastoma. Indian J Pediatr 2010;77:535–40.
[2] Bakhshi S, Singh PP, Swaroop C. Outpatient Consolidation chemotherapy in pediatric AML: a retrospective analysis. Hematology 2009;14:255–60.
[3] Kumar A, Biswas B, Chopra A, Kapil A, Vishnubhatla S, Bakhshi S. Early discontinuation versus continuation of antimicrobial therapy in low risk pediatric cancer patients with febrile neutropenia, before recovery of counts: a Randomized Controlled Trial (DALFEN Study). Indian J Pediatr 2020 Jun 15.Online ahead of print. doi: 10.1007/s12098-020-03377-x.
[4] Srivastava R, Gupta VG, Dhawan D, Geeta K, Bakhshi S. Poor nutritional knowledge and food restrictions among families of children with cancer and their impact: a cross-sectional study of 700 families. J Psychosoc Oncol 2018;36:658–66.
[5] Pramanik R, Bakhshi S. Metronomic therapy in pediatric oncology: a snapshot. Pediatr Blood Cancer 2019;66(9):e27811.

E-mail address: sambakh@hotmail.com

https://doi.org/10.1016/j.ebiom.2020.103199