



## Editorial

# CHILDHOOD MALIGNANCIES IN BANGLADESH: CHALLENGES AND SOLUTIONS

Child hood cancer is an emerging health problem in developing country like Bangladesh. Because of decreased infant mortality rates in developing countries resulting from better management of infectious diseases and current population growth, the number of childhood cancer is expected to increase by 30 % by 2020<sup>1</sup>. In Bangladesh, the overall cancer burden including adolescent and childhood cancer is largely unknown due to the nonexistence of (population-based) cancer registries<sup>2,3</sup>. The proportion of childhood cancers is expected to be high in Bangladesh because of the young population structure- about 47 % of the population is under 15 years old<sup>4</sup>.

Bangladesh has no authentic cancer statistics but nearby country scenario is available. In Pakistan incidence is 100 per million in <15 years of age and in India it is 64 per Million<sup>5,6</sup>. In 2012, the population was estimated to be 164 million with 47% under 15 years. There is no national population based cancer registry but using worldwide incidence rates of between 180/million children we expect 13,000 new cases/year in Bangladesh. Only about 25% of those numbers are actually currently diagnosed. Under-5 mortality is now 46/1000 live births and infant Mortality 38/1000 live birth<sup>7</sup>.

GOB has considerable focus on maternal & child health and disease prevention. Poverty is a major issue but the national economy is showing positive growth. Children present late with cancer as a result of poor public and local health worker awareness of the meaning of signs and symptoms of cancer. Consequently, only about 80% of children reaching secondary/tertiary hospitals can be offered potentially

curative therapy, and of those many families cannot afford to pay for full treatment<sup>7</sup>.

Over time, the childhood and adolescent cancer incidence has increased which is most likely due to improved awareness among clinicians, diagnostics and registration. Hence, the most recent period (2011–2014) represents the most reliable overview although the incidence rates are still low compared to India where the total childhood cancer rates varied between 38 and 124 per million person-years compared to 8 per million person-years in Bangladesh<sup>8</sup>.

Total 80000 death /year in < 19 years of age due to cancer and in < 19 years of age 5 year survival in low income countries as low as 10% while that in developed countries like USA & UK as high as 80%<sup>2</sup>. Common childhood cancers are Leukemia , CNS Tumor, Lymphoma, Neuroblastoma, Nephroblastoma, Bone tumor (Osteosarcoma & Ewing's sarcoma), Rhabdomyosarcoma, Germ cell Tumor, Retinoblastoma and hepatoblastoma<sup>9</sup>. Common presentation are -Continued weight loss, Headaches, vomiting, Increased swelling & pain in bones, Lump or mass in abdomen, neck, Development of excessive bleeding, Constant infections, A whitish color of Eye, Nausea, Constant paleness, Eye or vision change, and Recurrent or persistent fever<sup>9</sup>.

Childhood cancer can be diagnosed by several investigations like ;Blood Count, Ultra sonogram, X-ray of Chest, CT Scan of Abdomen, Chest, Brain, MRI, PET-CT scan, Bone marrow examination, Biopsy ,Biochemical Marker- á feto-protein, LDH and Cancer Marker

Treatment options are- Chemotherapy, Targeted Therapy, Surgery, Radiotherapy, Bone marrow Transplantation. Cure Rate depend on -Type of Cancer, Stage of cancer, Early Diagnosis and Treatment. Overall survival increases 80% from 10% over last 40 years<sup>10</sup>.

Overall cure rates increased due to a) Development of active chemotherapeutic agents b) Improvement in our understanding of proper dosing schedules and combination of drugs c) Significant improvement in supportive agents.

### Bangladesh Perspective

First pediatric Oncology Center in BSMMU was created in the early 1990's. In December 2008 government of Bangladesh established Pediatric Hematology & Oncology Department in 8(eight) Medical Colleges hospitals. Pediatric Onco-surgery dept. was established in Dhaka medical College hospital & Chittagong Medical College hospital in 2017. In National Institute of Cancer Research and hospital (NICRH) was started only solid tumor treatment from 2005. First Government functioning paediatric haematology and oncology center was Dhaka Medical College hospital (DMCH) in 2010. Dhaka Shisu Hospital started protocol based treatment from 2014 (Though centre established earlier). Chittagong Medical College hospital (CMCH), Sir Salimullah medical College hospital (SSMCH) and Sylhet MAG Osmani Medical College hospital (SOMCH) are treating pediatric cancer patients (from 2014). In private sector Ahsania Misson cancer hospital, Square hospital, Delta Medical College hospital and united hospital are treating paediatric cancer patients but most consultants of these hospital are driven by adult oncologist or radiation oncologists or adult haematologists.

In Dhaka Medical College Hospital from July 2012 to March 2017 total; 737 patients were admitted among them 94(13%) patients completed therapy, treatment continuing 297 (40%) but 87(11%) guardian refused to treat the child and 261(34%) patients abandoned treatment at any stage of treatment. In this period 157 (21%) patients died, most of the death due infection or toxic death. Most of admitted the patients 261(48%) are Acute Lymphoblastic Leukemia (ALL) followed by AML 78(11%), NHL 72(10%), Wilm's Tumor 44(6%) and Hodgkin's Lymphoma 37(5%). Till date more than 2800 patients have been treated in BSMMU

### Challenges of Paediatric Malignancy management in Bangladesh

Following awareness created by the campaign of media and workshop

1. Increased number of referral to the Pediatric Oncology Centers
2. Workload increasing but skilled manpower and facilities are not adequate
3. Total number of pediatric oncologists in Bangladesh is only 29.
4. Late diagnosis and advanced disease
5. Early toxic death
6. Refusal to treat / stop treatment prematurely (47%)
  - a. Economical constraint
  - b. Lack of helping manpower
7. Most drugs are imported and costly
  - a. Inconsistent supply
  - b. Sudden raise of price
  - c. Shortage of bed in hospital
8. Unavailability of Blood and Blood products
9. Lack of
  - Reliable and modern diagnostic facilities
  - Patient transportation system
  - Functioning cancer support group
  - Shelter Home
10. Unavailability of pediatric Onco-surgeon for Solid tumor management
11. Lack of support group

### Proposals

- a) Creation of effective Support Group
- b) Establishment of functioning Cancer Home
- c) Awareness through Electronic and Print Media
- d) Development of non-governmental treatment facilities.
- e) Ensure continued supply of necessary drugs.
- f) Increase Cancer Diagnostic facilities.
- g) Manpower development in both pediatric Oncology and Pediatric Onco-surgery

### Conclusion

Paediatric Malignancies are increasing burden for our country but these are curable with simple effort. Establishment of Childhood cancer institute, creating posts of pediatric oncologists as well as onco-surgeons, support group, availability of drugs and pediatric cancer home may help to reach the goal of

success in pediatric malignancy. We can win the battle of childhood malignancy management with our sincere effort and commitment to the community and country. No matter how big or small you think your support is, every bit helps us get closer to reaching our goal of finding cure for Childhood Cancer.

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