

abstract

Challenges with Multimodality Treatment in Children with Rhabdomyosarcoma: Real Scenario from a Tertiary Level Pediatric Cancer Center, Bangladesh

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Challenges with Multimodality Treatment in Children with Rhabdomyosarcoma: Real Scenario from a Tertiary Level Pediatric Cancer Center, Bangladesh

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Introduction: Rhabdomyosarcoma (RMS) management is complex and challenging in children. Due to aggressive growth pattern and high metastatic potential combined multi-modality therapy like surgery, radiation therapy and systemic chemotherapy is needed. National Institute of Cancer Research and Hospital (NICRH), Bangladesh is unique where multimodal treatment can be applied. The study was done to see the feasibility as well as to identify the challenges with multi-modal therapy in children with RMS.

Methodology: The prospective observational study was conducted at Pediatric Hematology & Oncology Department of NICRH, Bangladesh from January' 2016 to December' 2020. Children up to 18 yrs of both sexes with definitive diagnosis of RMS were included consecutively. Risk-adapted multimodal treatments were applied for the children. Patients were followed up to 30th December 2023. Challenges were identified from records of treatment course and were categorized as surgery related, radiotherapy related, chemotherapy associated, Disease outcome and related to treatment regularity. Data were analyzed by SPSS-version 23.

Results: The study enrolled 146 children with RMS, age ranges 0.33 to 17 years with mean $6.10 \pm SD4.72$; Male: Female = 1.4: 1. Complete remission was 17.1% , with relapse and death 65.1 %. Challenges related to surgery were 51.26%, radiotherapy 26.02% and chemo associated were 21.9%. Irregular treatment 20.5% and advanced stage disease 19.17% added more challenges.

Conclusion: The study found a high rate of mortality and relapse. Major challenges were identified mostly from local treatment modalities.