An analysis of nutritional aspects and its impact on cancer treatment in pediatric cancer patients

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**Background:** Malnutrition is prevalent in the pediatric population in India. There is paucity of data on the prevalence of malnutrition in pediatric cancer patients and the impact of cancer treatment on nutritional status.

**Material & Methods:** This was a retrospective study of 197 patients of less than 18 years of age at our hospital from May 2012 to June 2015. Data were analyzed at systematic time points in therapy. Patients’ weight was plotted on the Centre for Disease Control (CDC) growth charts. Patients were defined to be undernourished if their weight for age was ≤3rd centile in CDC growth charts and obese if their weight for age was ≥97th centile on CDC growth charts.

**Results:** Out of 197 patients, 110 were solid tumors including brain tumors, retinoblastoma, Ewing's sarcoma, osteosarcoma, neuroblastoma, Wilms tumor, hepatoblastoma and rest 87 cases were acute lymphoblastic leukemia, acute myeloid leukemia, Hodgkin and non-Hodgkin lymphoma. At diagnosis, under-nutrition was seen in 55% patients, this increased to 60% midway during treatment and decreased to 25% at the end of treatment (P=0.001).

**Conclusion:** Under-nutrition is present in half of the pediatric cancer patients presenting to our hospital. Active nutritional intervention and education were able to significantly reduce the prevalence of under-nutrition in patients at the end of treatment.

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