

Characteristics of Pediatric Patients at the Emergency in one Pediatric Oncology Department in a Cancer Hospital in Brazil

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Background

Treatment of childhood cancer is associated with complications due to the disease and/or its treatment, requiring urgent or emergent medical care. The possibility to offer treatment 24 hours a day, 7 days a week for patient with cancer is fundamental to improve cure rates. The aim of the Study is to describe the reasons for emergency department visits, and factors associated with hospital admission.

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- Referral Centre for Pediatric Oncology patients
- 270 new cases with cancer per year (70% solid tumors; 30% hematologic malignancies)
- 43% Extreme poverty (income less than ½ minimum wage per capita)
- Brazilian National Health System (SUS). Medical treatment including hospitalization and medications is free of charge. Assistance for accommodation, transport and feeding are available
- Pediatric Emergency Department for pediatric oncology patients, since the year of 2009



Figure 1. Pediatric Emergency Department
 - 4 beds, 1 nursing station, 1 consult room
 - 3 pediatricians, 5 pediatric hematology oncologists,
 - 1 pediatric intensive care, 6 nurses
 - Treatment 24 hours a day, 7 days a week

Methods

We conducted a retrospective cohort analysis through database of the registered visits of pediatric patients with cancer to the pediatric emergency department (ED) within one year, from 01/01/2017 to 31/12/2017. Data collected were age, gender, tumor diagnosis, oncologic status, number of visits per patient, reason for emergency consultation and outcome.

Results

There were 3,557 visits by 757 pediatric patients with cancer over the study period. In 86% patients were solid tumors and 14% patients hematologic malignancies. The median age was 9 years (range 0.4 to 29.6 years).

Table 1. Demographics and clinical characteristics of pediatric patients seen at the emergency (n=757 patients)

Patient Characteristics	n	%
Gender		
Female	362	47.8
Male	395	52.2
Age - years		
<1	11	1.6
1-4	188	24.8
5-9	197	26.0
10-14	172	22.7
15-19	158	20.9
>20	31	4.0
Cancer Diagnosis (ICCC-3)		
I. Leukemias	73	9.6
II. Lymphomas	50	6.6
III. CNS neoplasms	189	25.0
IV. Neuroblastoma	74	9.8
V. Retinoblastoma	46	6.1
VI. Renal tumors	61	8.1
VII. Hepatic tumors	12	1.6
VIII. Malignant bone tumors	64	8.5
IX. Soft tissue sarcomas	98	13.0
X. Germ cell tumors	27	3.6
XI. Other malignant epithelial neoplasms	24	3.2
XII. unspecified malignant neoplasms	10	1.3
Benign Lesions	29	3.6
Total	757	100

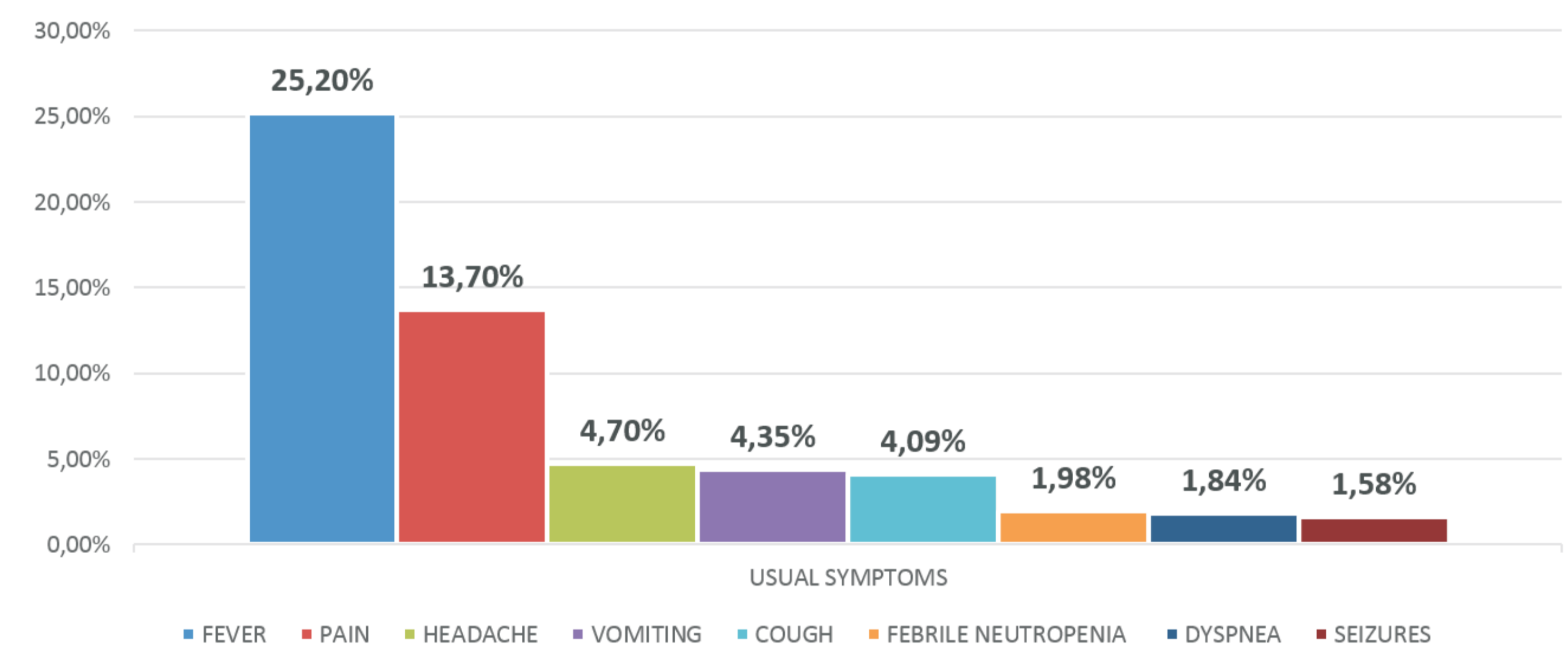


Figure 2. Reasons Prompting Emergency Department Among Pediatric Cancer Patients, January to December 2017 (n=3.557 visits)

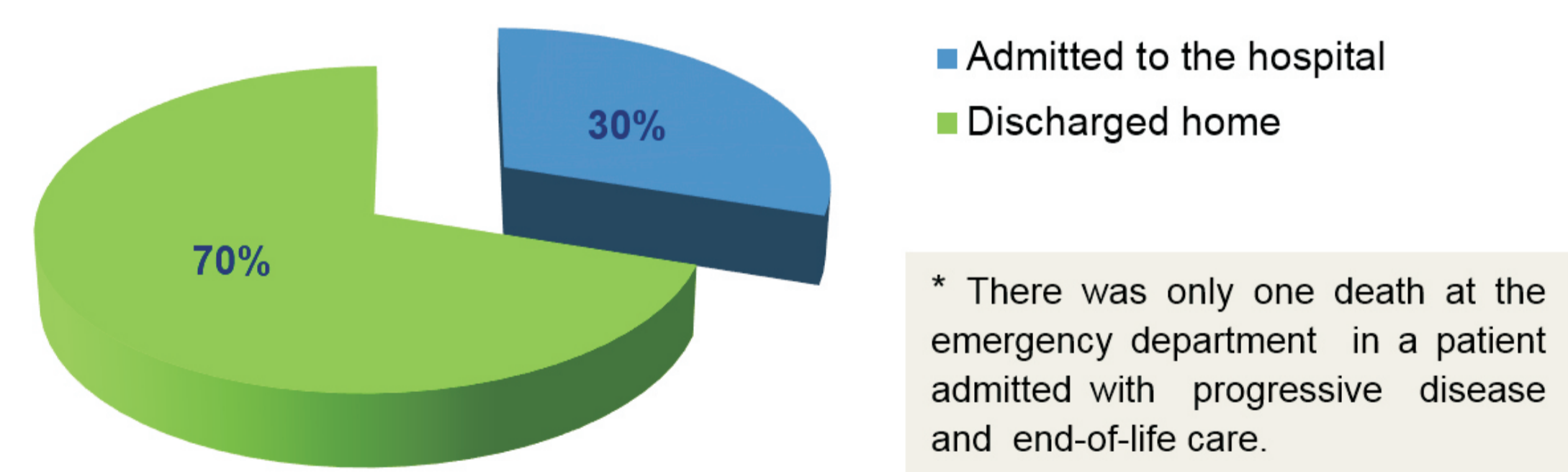


Figure 3. Follow up of patients admitted to the Emergency Department, January to December 2017 (n=3.557 visits)

Conclusion

- Fever and pain were the most common reason for ED visits among pediatric patients with cancer
- In our cohort, 30% of the ED visits resulted in admission.
- Future study will evaluate factors associated with increased rate of admission from ED.
- This knowledge will be important to planning treatment care, to design possible preventive interventions and improving results