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A I M S  &  O B J E C T I V E S :  Some children with cancer in PICU will not return to their functional baseline at the end of hospitalization. We aimed to assess risk variables for changes in functional status.

M E T H O D S :  Retrospective cohort of patients admitted in PICU from January, 2014 to January, 2019. The FSS (Functional Status Scale) was applied at admission to the PICU and at hospital discharge, in survivors. A new morbidity was defined as an increase ≥ 3 points between admission and discharge. The outcome “new morbidity” was evaluated in logistic models with risk variables.

R E S U L T S :  We analyzed 643 patients, with a median age of 93.6 months. The median length of stay was 6 days (range 2 to 192 days). There were 88 deaths (13.7%). Among the 555 survivors, 36 patients (6.5%) had a new morbidity at hospital discharge. From these, in 33 patients (5.9%), the degree of impairment was at least moderate (FSS score ≥ 10); in 7 (1.25%), was severe (FSS ≥ 16). The mean FSS at admission was 6.87 (SD: 1.9) and, at discharge, 7.23 (SD: 2.73; P = 0.017 in the T test). The variables “PRISM IV value” (odds ratio [OR] = 1.08, P = 0.001), ‘age in months’ (OR = 0.99, P = 0.004) and “central nervous system tumor” (OR = 3.57, P = 0.000) were independent predictors of new morbidity in a multivariate model.

C O N C L U S I O N S :  Functional impairments are related to the degree of physiological derangement, younger age and CNS neoplasms, and can theoretically be predicted in statistical models.


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A I M S  &  O B J E C T I V E S :  Pediatric Early Warning Systems (PEWS) are clinical assessment tools for early identification of clinical deterioration in hospitalized patients, however, it is unclear if they can be implemented in hospitals of varying resource levels. We describe successful implementation of PEWS in 17 pediatric oncology centers in Latin America and the Caribbean.

M E T H O D S :  The Multicenter PEWS (EVAT) Program aims to improve hospital outcomes for children with cancer through implementation of PEWS. From 2017 to 2019, centers participated in a mentored, 3-phase quality improvement program to: 1) prospectively monitor clinical...
deterioration, 2) pilot and implement PEWS, and 3) achieve programmatic sustainability. Regional and international PEWS experts trained local leadership teams in standardized PEWS implementation methodology. The local team then trained clinical personnel and monitored quality of PEWS implementation via 3 process measures: omissions, errors in calculation, and algorithm non-adherence. Implementation “success” was defined by 2 consecutive months with <15% errors.

RESULTS: Participating centers included 4 oncology, 7 pediatric, and 6 general hospitals in 8 countries, with a combined 11,000 annual pediatric hematology-oncology hospital admissions. Nursing:patient ratios ranged from 1:3 to 1:18 (median 1:7). Centers were sequentially trained in program methodology, conducted a pilot, and implemented PEWS. All 17 centers met criteria for successful implementation over a median of 5.3 months (range 3-11) from pilot to implementation completion. To date, over 2,300 nurses and physicians were trained in PEWS.

CONCLUSIONS: PEWS can be quickly and successfully implemented using a mentored quality improvement program across hospitals of varying organization and resource-levels, resulting in high program quality.

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CLINICAL STUDY ON THE EFFECTIVENESS AND SAFETY OF NIMODIPINE IN PREVENTING VASOSPASM IN CHILDREN WITH INTRACRANIAL HEMORRHAGE

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AIMS & OBJECTIVES: We conducted this prospective randomized control clinical study aim to evaluate the effectiveness and safety of nimodipine in preventing vasospasm in children with intracranial hemorrhage.

METHODS: We consecutively recruited intracranial hemorrhage patients who were admitted in pediatric intensive care unit (PICU) of Beijing children’s hospital from January 2015 to November 2018. Patients in the nimodipine group were treated with prophylactic nimodipine. The control group accepted exact the same treatment besides the nimodipine. If vasospasm occurs during monitoring, nimodipine is administered until the spasm is relieved or the child is discharged.

RESULTS: There were 81 children with intracranial hemorrhage were enrolled, 38 in the nimodipine group and 43 in the control. 21 patients developed vasospasm, including 9 cases (24%) in the nimodipine group and 12 cases (28%) in the control group. The difference in the incidence of vasospasm between the two groups was not statistically significant. There were no statistically significant differences between the two groups in survival rate, length of hospitalization, and Glasgow coma scale at discharge. On the 28th day after discharge, the survival rate of the nimodipine group was significantly higher than that of the control group (97% vs. 79%, \( \chi^2=6.242, P=0.016 \)), and the proportion of favorable brain function (PCPC score 1 to 3) was significantly higher than that of the control group (89% vs. 58%, \( \chi^2=10.011, P=0.002 \)).