



NUTRITIONAL STATUS AND STUNTING DURING TREATMENT IN PEDIATRIC CANCER PATIENTS

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Background and aims

Malnutrition is frequent in pediatric cancer patients. We investigated changes in nutritional status during treatment, starting from different basal conditions.

Methods

Consecutive inpatients from the Pediatric Oncology Unit, aged 0-18, affected by solid tumors, were enrolled from 10/2020 to 06/2022. STRONGKids and Subjective Global Nutritional Assessment for children (SGNA) were applied at T0 (diagnosis); anthropometric data (BMIz-score/WHz-score and HAZ-score) were collected at T0 and T1 (end of treatment protocol). The nonparametric Wilcoxon-signed-rank-test was applied to compare the distribution of the BMIz-score and HAZ-score between the two times.

Results

39 patients were enrolled and completed treatment protocol (M21/F18; median age 9.5ys, range 0-18). At diagnosis, the median BMIz-score was -0.07 (IQR: -1.07, 0.57), the median HAZ-score was -0.02 (IQR: -0.70, 0.68); a significant worsening was observed in both parameters at T1 (median BMIz-score -0.98, IQR: -1.99, -0.12; P=0.014; median HAZ-score -0.10 (IQR: -1.06, 0.32; P=0.015). Malnutrition risk at T0 was severe in 9 patients (23%), moderate in 30 (77%): considering BMIz-score, in moderate risk group a significant worsening was measured (P=0.003), in the high-risk group BMIz-score did not change significantly. Using SGNA, at baseline 13 patients (33%) were moderately malnourished, 26 (67%) presented normal nutritional status. Comparing T0-T1 scores, malnourished patients did not show a significant worsening, instead those with normal nutritional status have a significant worsening of both BMIz-score (P=0.001) and HAZ-score (P=0.021).

Conclusions

In a limited sample, our data confirmed a worsening in nutritional status and stunting during treatment. In addition, patients with low-moderate risk and normal nutritional status at diagnosis have a significant worsening because of cancer and therapy. A nutritional follow-up is advisable in pediatric cancer patients, independently of the risk and nutritional status at baseline.

