Assesment of Malnutrition in Hospitalized in Iran and Newzeland

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Introduction:
Hospitalized children are often at increased risk of nutritional impairment at or during admission.

Objectives:
The aims of this study were to (1) define the nutritional state of hospitalized children with comparison to healthy children in two different countries and (2) compare and contrast three nutritional risk screening (NRS) tools for hospitalized children in terms of the ease of completion and the validity of scores with comparison to current nutritional status.

Materials and Methods:
Children admitted to two paediatric teaching hospitals located in Iran and New Zealand were enrolled, along with healthy control children from the same communities. Nutritional state was assessed by anthropometry and classified as moderate/severe malnutrition according to WHO criteria. Three NRS tools (Screening Tool for the Assessment of Malnutrition (STAMP), Screening Tool for Risk On Nutritional status and Growth (STRONGkids) and Paediatric Yorkhill Malnutrition Score (PYMS)) were applied to all inpatients and patients classified from low to high risk.

Results:
281 inpatients and 262 controls were recruited in the two countries. The prevalence of moderate/severe under-nutrition in the Iranian inpatient group was 25.2% versus 3% in the control group, respectively (P=0.0001). The rate of under-nutrition in NZ inpatients was 9.9% versus 3.7% in the community group (P=0.04). In contrast, the prevalence of overweight/obesity in the Iranian control group was 22% compared to just 2.5% in the inpatient group (P=0.04), while there was no difference between the two groups in NZ (P=1.0). NRS tools were able to identify most of the malnourished patients in the medium to high risk groups in both countries.

Conclusion:
Hospitalized children have higher rates of under-nutrition than healthy children from the same community. The three NRS tools were able to identify children at nutritional risk, but with differing utility. STRONGkids appeared to be the most useful and reliable tool in both countries.

Key Words: Iran, Hospitalized, Malnutrition, Newzeland.

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