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EVALUATION OF A NUTRITIONAL REHABILITATION PROGRAM WITH INCREMENTAL CALORIC STEPS IN PEDIATRIC PATIENTS WITH ANOREXIA NERVOSA: A PILOT STUDY

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Background and aims

There are no validated protocols for nutritional rehabilitation of hospitalized patients with anorexia nervosa (AN). Very few data exist on the effects of refeeding on body composition.
This is a pilot study to evaluate the effects of a predefined incremental energy protocol provided orally or by NGT.

Methods

We prospectively analyzed AN patients receiving the new protocol compared retrospectively to patients treated with the standard method.
Anthropometric data, length of stay (LOS) and caloric intake were collected at admission (T1), after 2 weeks (T2) and at discharge (T3). Bioimpedance analysis(BIA) parameters and arm circumference (MUAC) were also collected in the prospective group.

Results

The groups showed no statistically significant differences at baseline. As expected, caloric intake was significantly higher at T1 (p= 0.0075) and T2 (p=0.0129) in the prospective group (figure 1). Delta BMI zscore at T2 was 0.29 (-0.58;1.3) in the prospective group vs -0,14 (-1.38;1.39) in the retrospective group, p= 0.0034 the hospital weight gain. Weight- and BMI z-score at baseline were inversely correlated to the hospital weight gain (p<0.001), and directly correlated to the caloric intake (kcal/kg/day).
LOS was indirectly correlated with FM% (β=-1.47; CI -2.57 -0.36; p=0.011) whilst correlates directly with FFM% (β=1.35; CI 0.33 2.38; p=0,012) an TBW% (β=1.63; CI 0.74 2.51; p<0,001).
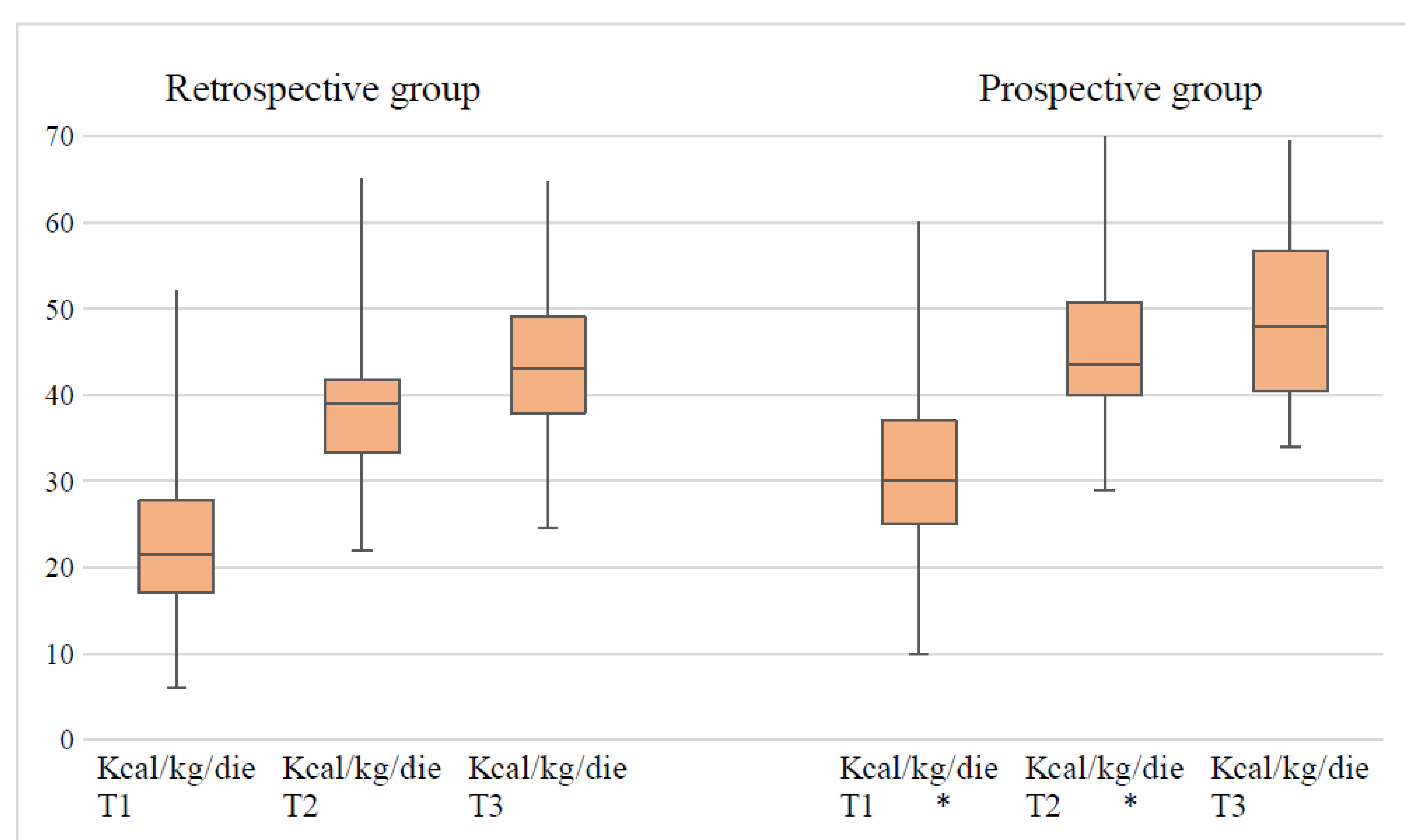MUAC is significantly correlated to FFM at T1 (β=1.53; CI 0.28 2.78; p=0.0199).

Conclusions

These results showed improvement of caloric intake and body composition.
FM percentage is negatively correlated with length of hospital stay.

Figure 1. Box plot showing caloric intakes (kcal/kg/die) at different times for both groups (prospective and retrospective)

*p<0.05