Use of a Pediatric Obesity Fall-risk Scale (POFS) in 301 hospitalized obese children and adolescents.

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Purpose: falls are a significant safety risk in hospitalized patients, but little evidence regarding their significance in obese children are available to date. Aim of the study was to determine whether the Pediatric Obesity Fall-risk Scale (POFS) is able to discriminate between hospitalized obese pediatric patients at high or low risk of falling, to evaluate its sensitivity and specificity and to analyze if the risk factors considered were actually related to the falling event.

Design and methods: the sample consisted of 301 children and adolescents hospitalized for a body weight reduction program. In this 12-month study, 14.6% of patients experienced a fall during hospitalization, the fall rate per 1000 patient days being 5.33 for the first and 4.36 for the second 6-month of the year. The components of the POFS included chronological age, history of falls, body mass index standard deviation score (BMI-SDS), and the ability to maintain equilibrium.

Results: no differences were observed between fallers and nonfallers as far as BMI and BMI-SDS are concerned. Compared with patients who did not fall, those who fell were significantly younger and shorter and their weights were lower. The POFS identified 85 patients with high and 216 with low falling risk, the two subgroups being comparable for BMI and BMI-SDS. Compared with patients with low fall-risk, those with high fall-risk were significantly younger and shorter and their weights were lower. The sensitivity of the POFS was 61.4%, while the specificity was 77.4%. The positive predictive value of the POFS was 31.8%, while the negative predictive value was 92.1%. The analyses of each POFS component did not show significant differences between fallers and nonfallers in terms of BMI-SDS and equilibrium test. Compared with patients who did not fall, those who fell were significantly younger, experienced a fall during the 3 months prior the admission in hospital and their total POFS score was higher.

Practice implications: preventing falls in hospitalized obese pediatric patients is challenging due to the markedly increased risk of this population and specific fall-risk assessment tools are required to early identify patients who needs more care, attention, and specific nursing/medical interventions.