Journal of
Obesity & Weight Loss Therapy

Durá-Travé, J Obes Weight Loss Ther 2016, 6:1
DOI: 10.4172/2165-7904.1000299

Opinion Open Access

Malnutrition in Hospitalized Children

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Opinion

The nutritional deterioration in hospitalized patients has been a subject of an extensive analysis, being associated to higher morbidity and mortality and, therefore, an increase in healthcare expenditure [1-4]. This eventuality has been widely debated at the highest administrative and political level, so making necessary the development of clinical guides and resolutions (from the Council of Europe) on feeding and nutritional care in hospitals [5-7].

The epidemiological studies of malnutrition in hospitalized children that have been carried out in occidental countries show a prevalence of malnutrition at the time of admission ranging 6.1 to 13.3% [8-15], making these patients more susceptible to present nutritional deterioration during the hospital stay [15-17]. However, this eventuality often goes undetected owing to the lack of specific strategies for nutritional screening [18].

Several nutrition screening tools have been designed to identify patients at risk of malnutrition, which have been validated and adapted to pediatric age. They basically consist of scoring systems that allow the identification of patients at risk of malnutrition (and, therefore, in need of a deeper clinical and nutritional evaluation), from clinical and anthropometric data. We should mention the *Pediatric Nutritional Risk Score* (NRS), as well as the *Screening Tool for Risk on Nutritional Status and Growth* (STRONGkids) and the *Screening Tool for the Assessment of Malnutrition in Pediatric* (STAMP), even though there is no clear consensus on the most appropriate nutrition screening tool to be applied in pediatric age [19-23].

The overall prevalence rate for malnutrition in pediatric patients at the moment of admission in our hospital are 8.2% [24], being this figure similar to those published in occidental countries [8-18] and, of course, much lower than those countries with worse socioeconomic conditions [17,25,26]. Nevertheless, it is important to highlight two variables that seem to play an important role in detecting patients at risk of malnutrition at admission: age and reason for admission. The 86% of the cases with malnutrition recorded in our hospital are infants and/or preschool children; and the diseases of the nervous and/or respiratory system account for almost half of the cases of malnutrition. Additionally, the congenital malformations, deformations and chromosomal abnormalities, even though with a low prevalence, involve a high risk of malnutrition.

The European Charter on the rights of children in hospital promulgated by the European Parliament and whose content was assumed and promoted by the UNICEF and the WHO, begins with the statement that "*children shall be admitted to hospital only if the care they require cannot be equally well provided at home on a day basis*". The policy for pediatric hospital admission in our environment, pursuant to this resolution, is quite restrictive, intending that only those patients whose pathology requires exclusive hospital care be admitted. In fact the 82% of inpatients throughout the year 2013 went through a hospital stay no longer than 5 days and that 5% overtook a 10-day hospitalization, being extended stays exceptional.

As a conclusion, it should be mandatory to accomplish an initial screening and follow up during hospitalization of younger patients and those suffering from diseases of the nervous and/or respiratory system and, especially, from congenital diseases, given the risk of presenting with malnutrition at the moment of admission and the potential deterioration during the hospital stay. Nevertheless, this strategy should be applied to every patient. This means, we should establish, on a routine basis, simple strategies to detect those patients at nutritional risk at the moment of admission, either by age or by the disease they suffer from, and also establish immediately all necessary measures of nutritional support in order to the prevention and, when applicable, resolution, of an adverse nutritional situation.

References

1. Pablo AM, Izaga MA, Alday LA. (2003) Assessment of nutricional status on hospital admisión: nutricional scores. Eur J Clin Nutr 57: 824-831.
2. Beck AM, Balknäs UN, Camilo ME, Fürst P, Gentile MG, et al. (2003) The European view of hospital undernutrition. Nutr Clin Pract 18: 247-249.
3. Correia MI, Waitzberg DL (2003) The impact of malnutrition on morbidity, mortality, length of hospital stay and costs evaluated through a multivariate model analysis. Clin Nutr 22: 235-239.
4. Pérez de la Cruz A, Lobo Támer G, Orduña Espinosa R, Mellado Pastor C, Aguayo de Hoyos E, et al. (2004) [Malnutrition in hospitalized patients: prevalence and economic impact]. Med Clin (Barc) 123: 201-206.
5. Beck AM, Balknäs UN, Fürst P, Hasunen K, Jones L, et al. (2001) Food and nutritional care in hospitals: how to prevent undernutrition--report and guidelines from the Council of Europe. Clin Nutr 20: 455-460.
6. Council of Europe. Committee of Ministers. Resolution ResAP (2003/3) on food and nutritional care in hospitals. Disponible en
7. European Nutrition for Health Alliance. STOP Disease-related Malnutrition: Prague. Declaration June 2009. Disponible en
8. Hendrikse W, Reilly J, Weaver L (1997) Malnutrition in a children's hospital. Clin Nutr 16: 13–18
9. Hankard R, Bloch J, Martin P, Randrianasolo H, Bannier MF, et al. (2001) [Nutritional status and risk in hospitalized children]. Arch Pediatr 8: 1203-1208.
10. Marteletti O, Caldari D, Guimber D, Mention K, Michaud L, et al. (2005) [Malnutrition screening in hospitalized children: influence of the hospital unit on its management]. Arch Pediatr 12: 1226-1231.
11. Pawellek I, Dokoupil K, Koletzko B (2008) Prevalence of malnutrition in paediatric hospital patients. Clin Nutr 27: 72-76.
12. Joosten KF, Zwart H, Hop WC, Hulst JM (2010) National malnutrition screening days in hospitalised children in The Netherlands. Arch Dis Child 95: 141-145.
13. Moreno Villares JM, Varea Calderón V, Bousoño García C, Lama Moré R, Redecillas Ferreiro S, et al. (2013) Nutrition status on pediatric admissions in spanish hospitals; DHOSPE study. Nutr Hosp 28: 709-718
14. Baxter JA, Al-Madhaki FI, Zlotkin SH (2014) Prevalence of malnutrition at the time of admission among patients admitted to a Canadian tertiary-care paediatric hospital. Paediatr Child Health 19: 413-417.

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Received February 12, 2016; **Accepted** Februray 16, 2016; **Published** February 19, 2016

Citation: Durá-Travé T (2016) Malnutrition in Hospitalized Children. J Obes Weight Loss Ther 6: 299. doi:10.4172/2165-7904.1000299

15. Groleau V, Thibault M, Doyon M, Brochu EE, Roy CC, et al. (2014) Malnutrition in hospitalized children: prevalence, impact, and management. Can J Diet Pract Res 75: 29-34.

16. Rocha GA, Rocha EJ, Martins CV (2006) The effects of hospitalization on the nutritional status of children. J Pediatr (Rio J) 82: 70-74.

17. Oztürk Y, Büyükgebiz B, Arslan N, Ellidokuz H (2003) Effects of hospital stay on nutritional anthropometric data in Turkish children. J Trop Pediatr 49: 189-190.

18. Huysentruyt K, Alliet P, Muyshont L, Devreker T, Bontems P, et al. (2013) Hospital-related undernutrition in children: still an often unrecognized and undertreated problem. Acta Paediatr 102: e460-466.

19. Sermet-Gaudelus I, Poisson-Salomon AS, Colomb V, Brusset MC, Mosser F, et al. (2000) Simple pediatric nutritional risk score to identify children at risk of malnutrition. Am J Clin Nutr 72: 64-70.

20. Hulst JM, Zwart H, Hop WC, Joosten KF (2010) Dutch national survey to test the STRONGkids nutritional risk screening tool in hospitalized children. Clin Nutr 29: 106-111.

21. McCarthy H, McNulty H, Dixon M, Eaton-Evans MJ (2008) Screening for nutrition risk in children: the validation of a new tool. J Hum Nutr Diet 21: 395-396.

22. Lama More RA, Moráis López A, Herrero Álvarez M, Caraballo Chicano S, Galera Martínez R, et al. (2012) [Validation of a nutritional screening tool for hospitalized pediatric patients]. Nutr Hosp 27: 1429-1436.

23. Huysentruyt K, Alliet P, Muyshont L, Rossignol R, Devreker T, et al. (2013) The STRONG(kids) nutritional screening tool in hospitalized children: a validation study. Nutrition 29: 1356-61

24. Durá-Travé T, San Martín-García I, González-Benavides A, Vaquero-Iñigo I, Herranz-Aguirre M, et al. (2015) Nutritional status at the time of admission among patients admitted to a tertiary-care paediatric hospital. Nutr Hosp 31: 2465-2471.

25. Sarni RO, Carvalho Mde F, Monte CM, Albuquerque ZP, Souza FI (2009) Anthropometric evaluation, risk factors for malnutrition, and nutritional therapy for children in teaching hospitals in Brazil. J Pediatr (Rio J) 85: 223-228.

26. Doğan Y, Erkan T, Yalvaç S, Altay S, Cokuğraş FC, et al. (2005) Nutritional status of patients hospitalized in pediatric clinic. Turk J Gastroenterol 16: 212-216.