

Malnutrition Matters, Joint BAPEN and Nutrition Society Meeting, 29–30 November 2011, Harrogate

Prevalence of malnutrition in paediatric patients admitted to a UK spinal injury centre

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Childhood malnutrition needs to be addressed, as it affects growth and development⁽¹⁾, increases susceptibility to clinical complications and increases healthcare costs⁽²⁾. Different methods have been used to assess nutritional status in children admitted to hospital, and there is no agreement as to which method best reflects nutritional status^(3–5). Current data on the prevalence of malnutrition (undernutrition and overnutrition) in children with spinal cord injuries (SCI) are limited. The aim of this prospective study was to determine the prevalence of malnutrition in paediatric patients with SCI in a specialist referral centre. After obtaining ethics approval, the weight and height of 62 children (mean age 11.4 years, s.d. ± 4.9 , 39.4% female, 83.6% Caucasian) with SCI (46.5% tetraplegia; 53.4% complete SCI) were studied during January – December 2010. Undernutrition was defined from the Screening Tool for the Assessment of Malnutrition in Paediatrics (STAMP)⁽²⁾ (moderate risk: STAMP score ≥ 2 , high risk: STAMP score ≥ 4), and overnutrition was defined by using BMI centile charts (overweight: $>91^{\text{st}}$ centile, obese: $>98^{\text{th}}$ centile). The most common causes of SCI in this sample group were non-traumatic (53.5%) road traffic accidents (37.2%), sports injuries (6.9%) and assault (2.3%). On admission, 51 (82.3%) were screened by STAMP. Twenty-four children (47.1%) were at risk of undernutrition (STAMP ≥ 2) and twelve (23.5%) were at high risk of undernutrition (STAMP ≥ 4). Twenty-one were overweight (41.2%) and thirteen were obese (25.5%). Only 57.1% of at-risk patients were referred for nutritional assessment. Previous intensive care unit stay (55.6% v 20.8%, $P < 0.05$); mechanical ventilation (58.3% v 18.2%, $P < 0.01$) and a need for artificial nutrition support (75% v 12.8%, $P < 0.01$) were found to be a potential risk factor for undernutrition (STAMP ≥ 2 v STAMP < 2). Children with SCI are prone to malnutrition, which has adverse consequences for short- and long-term health and well-being. Nutritional screening and subsequent appropriate action is needed in this vulnerable group.

The authors would like to thank the patients and ward staff on St. Francis ward, Prof. John Reilly from the University of Glasgow, Dr. Joan Gandy from the British Dietetic Association for input in protocol development, Ebba Bergstrom and Kirsten Hart from NSIC for height estimations, Pauline Bateman from Medical Records, and the Waterloo Foundation and Abbott Nutrition for the financial support. UCL Staff receive support from the CBRC funding awarded to UCL and its partner Trust by NIHR.

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