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How malnutrition is detected and managed in patients with spinal cord injuries (SCI): results from a UK multi-centre study

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Malnutrition has severe adverse effects on health outcomes and healthcare expenditure(1). However, recognition and treatment of malnutrition (under/overnutrition) in patients with spinal cord injuries (SCI) in SCI centres (SCIC) are not often a priority in clinical practice(2) and data on the prevalence of malnutrition in SCI patients are limited. The aims of the study were to (1) investigate how nutritional risk of patients is determined across all twelve SCIC in the UK and Ireland; (2) establish the prevalence of malnutrition using a generic nutrition screening tool (NST), Malnutrition Universal Screening Tool (MUST)(3) and BMI. After obtaining ethics approval, 11/12 SCIC participated in part 1 of the study. Eight used NSTs, three had no dedicated staff member for nutritional care, and nine SCIC reported that they did not have a clinical nutrition team. Four SCIC, contributing 49% of the SCI beds in the UK, participated in part 2 of the study from July 2009 to March 2010. One hundred and fifty patients (aged 18–88, median: 16.9, 30.7% female) were studied after obtaining written informed consent. The Malnutrition MUST score, baseline clinical data, anthropometric measurements and blood biochemistry were assessed within 96 h of admission. Differences between independent groups were assessed with the Mann–Whitney test. The risk of undernutrition was defined from a MUST score ≥ 1 and overweight was defined from BMI ≥ 25 and ≥ 30 as obese. The present study found that 45.9% of patients were overweight and 15.3% were obese; the prevalence of undernutrition risk was 44.3%. Patients who were at risk of undernutrition were found to have significantly reduced total protein, albumin, Mg, creatinine, Hb, BMI, appetite and significantly higher C-reactive protein, and received more prescribed medications. The process of nutrition risk screening varied between SCIC and may lead to under-detection and under-management. The very high percentage of SCI patients who are at risk of malnutrition is worrying, given the adverse consequences for short- and long-term health and well-being. Strategies for systematic screening and treatment of malnutrition in SCI patients need to be refined and implemented. Further research on the best combinations of simple clinical indices relevant to patients with SCI is warranted.

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