

Abstract

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Predicting the outcome of artificial nutrition by clinical and functional indices.

Donini LM, Savina C, Ricciardi LM, Coletti C, Paolini M, Scavone L, De Felice MR, Laviano A, Rossi Fanelli F, Cannella C.

Department of Medical Physiopathology (Food Science Section), Sapienza University of Rome, Italy.

OBJECTIVE: Artificial nutrition (AN) is now considered medical therapy and has progressively become one of the mainstays of the different therapeutic options available for home or hospitalized patients, including surgical, medical, and critically ill patients. The clinical relevance of any therapy is based on its efficacy and effectiveness and thus on the improvement of its cost efficiency, i.e., the ability to provide benefits to the patients with minimal wasting of human and financial resources. The aim of the present study was to identify those indices, clinical, functional, or nutritional, that may reliably predict, before the start of AN, those patients who are likely not to benefit from nutritional support.

METHODS: Three hundred twelve clinical charts of patients receiving AN between January 1999 and September 2006 were retrospectively examined. Data registered before starting AN were collected and analyzed: general data (age, sex), clinical conditions (comorbidity, quality of life, frailty), anthropometric and biochemical indices, type of AN treatment (total enteral nutrition, total parenteral nutrition, mixed AN), and outcome of treatment.

RESULTS: The percentage of negative outcomes (death or interruption of AN due to worsening clinical conditions within 10 d after starting AN) was meaningfully higher in subjects >80 y of age and with reduced social functions, higher comorbidity and/or frailty, reduced level of albumin, prealbumin, lymphocyte count, and cholinesterase and a higher level of C-reactive protein. The multivariate analysis showed that prealbumin and comorbidity were the best predictors of AN outcome. The logistic regression model with these variables showed a predictive value equal to 84.2%.

CONCLUSION: Proper prognostic instruments are necessary to perform optimal evaluations. The present study showed that a patient's general status (i.e., comorbidity, social quality of life, frailty) and nutritional and inflammatory statuses (i.e., lymphocyte count, albumin, prealbumin, C-reactive protein) have good predictive value on the effectiveness of AN.

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