

53 Nutritional status and energy balance of hospitalized feline patients at the Faculty of Veterinary Medicine of Liège

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Introduction: Negative Energy Balance (NEB) is a frequent problem in hospitalized cats. NEB can induce hepatic lipidosis and malnutrition. The major consequences of malnutrition are decreased immunocompetence and decreased tissue synthesis and repair. The aim of this study was to evaluate the proportion of cats in NEB and to give recommendations to improve nutritional status of hospitalized cats.

Material and methods: We included 177 cats (108 from the Surgery Unit (S) and 69 from the Medicine Unit (M)) hospitalized at the Faculty of Veterinary Medicine of Liège for at least 2 days in similar conditions. For each cat, signalment, disease, length of hospitalization, body condition score (BCS) on a 6-point scale, physical status score (PSS- from 1 normal patient to 5 –moribund-) ¹ were recorded. Their energy requirement (ER) was calculated using the equation $BW \times 70 \text{ kcal}^2$. ER was multiplied by a factor (of 1.2 to 1.4) to give the illness ER (IER) for more critical cases like pneumonia, peritonitis, multisystem trauma, cachexia associated with long-standing cardiac disease, renal disease and cancer. Cats were weighted every day to check the accuracy of calculated ER or IER. We recorded if cats were in a NEB because of fasting prior to diagnostic procedures or because of anorexia, if cats ate spontaneously to cover ER or IER, if the staff had to stimulate cats to cover ER or if tubes had to be placed. Chi-square analyses were performed using SAS system.

Results: Domestic Shorthair cats represented 83 % of patients. Sixteen percents were intact males, 37 % were neutered males, 18 % were intact females and 29 % were spayed females. The average age was 5 years (4.5 years in S and 6.2 in M). In S, 46 % of patients were hospitalized after a trauma and 10 % for intervention of the urinary tract, digestive tract or in ophthalmology. In M, 25 % of cats suffered from renal diseases, 23 % from respiratory diseases and 19 % from metabolic diseases. The average PSS was 1.6 in S and 2.6 in M. We observed a significant relationship between Unit and mortality, PSS and BCS ($P \leq 0.05$). We observed a significant relationship between PSS and BCS ($P < 0.05$). In S, 22 % of cats were too thin, 54 % had an ideal BCS and 24 % were overweight (OW). In M, 38 % of cats were too thin, 33 % had an ideal BCS and 29 % were OW. We observed a significant relationship between gender and age group and BCS ($P < 0.05$). The average length of hospitalization was 5 days in the 2 units. Thirty eight percent of cats were in a NEB, 7 % had orders to withhold food and 31 % of cats refused any offered food; 14 % ate spontaneously to cover ER, 23 % ate to cover ER with stimulation and 16 % ate spontaneously to cover IER, and tubes were placed in 9 % of cats without significant differences between Units. We observed a significant relationship between PSS and NEB- cats with a bad prognosis were more often anorectic-, but not between PSS and BCS ($P < 0.05$). We observed a significant relationship between age and NEB ($P < 0.05$): 75 % of young cats (<1 year) ate to cover ER and 60 % of old cats (7-12 years) were anorectic.

Discussion: The population was quite different in S and in M but it did not influence the NEB - 30 % of cats were in a NEB despite intensive nursing. It is therefore very difficult to give general advices/recommendations to reduce NEB.

References:

- ¹ Remillard et al., Veterinary Therapeutics, 2001, 2, 301-310.
- ² NRC, 1986.