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Whey proteins isolate supplementation in additional to nutritional counseling in cancer patients

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Dear Editor,

it is now well recognized that malnutrition is a hot topic in the management of the cancer patients and it is related to an impairment quality of life and a worse overall prognosis, due to prolonged hospitalization, higher degree of treatment-related toxicity and reduced response to cancer treatment[1]. Whey proteins isolate (WPI) supplementation in addition to nutritional counseling (NC) in malnourished advanced cancer patients (82 patients versus (vs.) 84 patients without WPI supplementation (only NC)) undergoing chemotherapy resulted in improved body composition, muscle strength, body weight, and reduced chemotherapy toxicity in a randomized controlled trial (RCT)[2].

The aim of this paper was to evaluate the change in body weight (BW) since the introduction on WPI supplementation in addition to NC in cancer patients in real-life. The rationale is the evidence of how the intake of WPI is particularly useful in the treatment of subjects with sarcopenia due to malnutrition, aging or chronic diseases. The choice to consider the change in BW as the primary endpoint of the study is related to both the convenience of detection in oncological daily clinical practice that its role as secondary endpoint in the only RCT[2].

A retrospective analysis of all consecutives patients with cancer followed at the Medical Oncology Unit of our Hospital between March 2021 and August 2021 and treated with WPI supplementation in addition to NC was performed. Chi-square-test, t-test, or Fisher's exact test was used in order to identify any possible relationship between results and the different prognostic variables.

We evaluated 19 patients. Median age was 71 years old (range: 51-82). At the last follow-up 7 patients (36.8%) were deceased and 12 patients (63.2%) were alive. The general case study is summarized in table 1. Median BW was 62 kg (range: 43-85) at baseline, 62 kg (19 patients (100.0%), range: 44-85) at the first-evaluation (median time: 29 days) and 69 kg (9 patients (47.4%), range: 44-85) at the second-evaluation (median time: 47 days). Thirteen (68.4%) patients maintained BW stability at the first-evaluation and 6 (66.7%) patients at the second-evaluation. At the chi-square-test there was no statistical relationship between the site of cancer (colorectal vs. gastrointestinal non-colorectal vs. others) and BW stability both at the first-evaluation (p=0.493) that at the second-evaluation (p=0.301).

We are aware of the limitations of a retrospective study, the small size of the cohorts and the fact that data coming from a single Institution could reflect only the habits of that particular set of physicians; on the contrary, studies like the above, though the analysis of not selected case study, are really real life experience. In facts, the patients described here represent a complete series who underwent treatment at our Unit in the considered time frame, were treated in a homogeneous way and carefully staged before the beginning of treatment and at regular intervals thereafter.

Table 1. The general case study.

Variable	Value	Number of patients (%)
Age	<65 years	5 (26.3)
	≥65 years	14 (73.7)
Sex	female	6 (31.6)
	male	13 (68.4)
Site	stomach	6 (31.6)
	lung	4 (21.1)
	colorectal	4 (21.1)
	pancreas	3 (15.8)
	oesophagus	1 (5.3)
	breast	1 (5.3)
Stage	early	3 (15.8)
	advanced	16 (84.2)
Active oncological treatment	yes	15 (78.9)
	no	4 (21.1)
Type of treatment	chemotherapy	9 (60.1)
	immune-therapy	2 (13.3)
	targeted agents	2 (13.3)
	hormone-therapy	2 (13.3)

On our knowledge, this is the first experience of WPI supplementation in addition to NC in cancer patients in daily clinical practice.

In conclusion, we found that the additional provision of WPI to malnourished cancer patients receiving NC maintained BW in most patients (regardless of the site) and in a relatively short time. Patients who continue to provision WPI in addition to NC for more than a month seems to improve BW.

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