

SUPPORTIVE TREATMENT OF CANCER

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Summary

Malnutrition is a common problem among cancer patients. Cachexia causes death in >20% of patients with malignancy. Cachexia is most pronounced in patients with carcinoma of the stomach and pancreas.

The aim of the study was to see whether appetite can be increased and weight loss decelerated using the pharmacological approach to appetite stimulation.

The study is retrospective and relates to 20 patients with cancer of different localization treated over a two-month period. The patients received individual dietary recommendations, nutrition support and megestrol acetate 400mg/day. All patients were assessed by using the PG – SGA score (Patient Generated Subjective Global Assessment) and ECOG status. Throughout the two-month period, appetite changes using a visual analogue scale and body weight changes were measured every two weeks.

With nutritional advice and pharmacological support, the appetite significantly increased to reach the appetite score – good ($p < 0.01$) in 75% of the patients, resulting in body weight increase of 3.6 kg on the average.

KEY WORDS: *anorexia, cachexia, megestrol acetate*

SUPPORTIVNO LIJEČENJE BOLESNIKA S KARCINOMOM

Sažetak

Karcinom je često udružen s malnutricijom. Kaheksija je uzrok smrti kod >20% oboljelih od malignih bolesti. Kaheksija je najizraženija u bolesnika s karcinomom želuca i gušterače.

Cilj rada bio je utvrditi je li moguće povećati apetit i usporiti gubitak tjelesne težine farmakološkim liječenjem stimulatorom apetita.

Retrospektivno smo obradili dvomjesečno razdoblje u kojem smo liječili 20 bolesnika oboljelih od karcinoma različite lokalizacije. Bolesnici su pojedinačno dobili prehrambene savjete, nutritivnu potporu i megestrol-acetat 400mg/dan. Bolesnicima smo odredili PG – SGA skor (Patient Generated Subjective Global Assessment) i ECOG status. Tijekom dvomjesečnog razdoblja pratili smo svaka dva tjedna promjene apetita bolesnika koristeći se vizualno analognom skalom i promjenama u tjelesnoj težini.

Nutritivnim savjetima i farmakološkom potporom apetit se znatno poboljšao u 75% bolesnika do kategorije dobrog apetita ($p < 0,01$), te je došlo do povećanja tjelesne težine za 3,6 kg u prosjeku.

KLJUČNE RIJEČI: *anoreksija, kaheksija, megestrol-acetat*

Epidemiological records for 2002 show 19,616 of new cancer cases and 12,077 of cancer deaths in Croatia.

One of the common symptoms of malignancy, and also a frequent side effect of cancer treatment is the reduction of appetite resulting in re-

duced food intake and the development of cancer anorexia/cachexia syndrome.

According to some studies, anorexia is present in 64% of patients at the moment of diagnosis, while cachexia develops in 50% of patients with any cancer type and at any stage of the disease, and in > 80% of patients with advanced malignancy. The share of patients with weight loss depends on the tumor type and varies over a range of 31% in patients with NHL to up to 87% in patients with pancreatic cancer.

The study conducted by the Eastern Cooperative Oncology Group on 3,047 patients with malignant tumors documented that a loss of only 5% body weight can significantly worsen prognosis and reduce survival in cancer patients. Cachexia is the main cause of death in more than 20% of cancer patients.

In cancer patients, anorexia is caused by a combination of tumor and host products, decreased taste perception, difficulty swallowing, inflammation of the oral mucosa, delayed gastric emptying, nausea, vomiting, intestinal obstruction syndrome, pain, specific treatment (chemotherapy and radiotherapy), and depression. A debilitating syndrome called cachexia may develop as a result of appetite loss. Cachexia is characterized by: weight loss of more than or equal to 10% of total body weight in a 6-month interval (muscle mass and fat tissue loss), general debility and loss of strength (asthenia), change in physical appearance and psychic stress.

Asthenia characterized by extreme tiredness after usual or minimum physical activity, and a sense of general exhaustion also develops in relation to the loss of appetite and body weight.

There are numerous lines of evidence showing the multifactorial nature of the pathogenesis of cancer cachexia, which is assumed to include numerous hypothalamic signal pathways responsible for modulating energy intake.

Among outstanding mediators there are hormones (leptin), neuropeptides (neuropeptide Y), cytokines with procachexic (TNF, IL-1, IL-6) and anticachexic effect (IL-4, IL-10, IL-13), and neurotransmitters (serotonin and dopamine). These mechanisms and pathways exhibit numerous feedback interactions. In the middle of metabolic events there is the liver that plays a role in the synthesis of acute-phase proteins, reduced al-

bumin synthesis, glycogenolysis and gluconeogenesis, and the xenobiotic synthesis reduction.

Anorexia and cachexia result in: the reduced efficacy of antitumor treatment, reduced resistance to infections, reduced response to cancer treatment, patient noneligibility for primary disease treatment, reduced physical endurance (inability to perform usual daily activities, limited self-reliance), deteriorated psychic state (increased anxiety and depression, loss of desire for treatment and life, and difficulty functioning in family and social life). In addition, patients experiencing loss of appetite and weight loss are not eligible for surgical treatment, they are more prone to developing post-surgical complications, they have poorer results and a poorer prognosis, and they experience prolonged hospitalization.

The correction of both appetite and body weight loss is significantly more difficult than its prevention, and therefore its early recognition and treatment are required with the aim of reducing mortality and improving the quality of life. Recognition of the cachexia risk requires monitoring of the appetite and body weight loss dynamics. The pharmacological treatment, along with nutritional advice, make the basis of therapy in anorexia/cachexia syndrome. The treatment is aimed at increasing appetite and the quantity of resorbed food, which may consequentially increase the body weight, enable both the administration and better tolerance of anti-cancer treatment, in order to achieve a faster recovery after the surgical procedure and reduce treatment complications, to shorten hospitalization and, the most important, to improve the quality of life of cancer patients.

In the treatment of appetite and weight loss in cancer patients, various substances and drugs have been studied.

This retrospective study included 20 patients with cancer of different localization (breast, colon, stomach, lungs, uterus, ovary, sarcoma) treated on an outpatient basis at the Department of Pain Management and Terminal Care, University Hospital for Tumors, Zagreb, Croatia over a two-month period. Locally advanced or metastatic disease was present in 45% of the patients, whereas 55% of them were without metastases. As regards their previous therapy, 55% of the patients received chemotherapy,

40% were treated with chemoradiotehrapy, 5% with radiotherapy alone and 30% of the patients were without any previous therapy. On the ECOG scale, 50% of the patients were those with limited self-reliance and those who spend more than 50% of their awake hours in bed or in a chair (ECOG 3); 33% of them were outpatients capable of taking care of themselves, but incapable of any physical activity, mobile more than 50% of their awake hours (ECOG 2); and 17% of them were outpatients limited in physically demanding activities, but capable of any less demanding to perform physical activities and tasks (ECOG 1). The functional capacity of the patients was as follows: 35% of the patients declared themselves as being capable of minimally demanding activities and spending most of the day in bed or in a chair; 29% did not feel capable of performing most of the usual activities, and declared themselves as spending less than a half a day in bed; 29% did not feel as usual, but declared themselves as capable of performing any normal activities; 7% declared themselves as rather bed-ridden and getting very rarely out of bed.

According to the ECOG scale, 50% of the patients were limited in their capacity to take care of themselves spending more than 50% of their awake hours in bed or in a chair. According to the PG – SGA, 70% of the patients had a low PG – SGA score and in 30% of them, PG – SGA scores were high. Compared to their body weight 12 months ago, the patients lost 13.25 kg on the average, and 70% of them reported to be eating less because of their appetite loss.

In 79% of the patients, the decrease in body weight occurred during the last two weeks before the examination appointment, and 74% of the patients reported to be eating much less than usual. Considering their PG – SGA score levels, the majority of patients, besides nutritional advice, also required pharmacological treatment for their appetite loss, and were therefore added

megestrol acetate. At their first outpatient visit, the patients had weak appetite assessed by VAS. After the administration of megestrol their appetite significantly improved to be assessed as good at visit 4 (32 days from the start of the treatment) and visit 5 (46 days from the start of the treatment). Actually, at outpatient visit 1, 25% of the patients were assessed to be without appetite, and appetite was assessed as weak, moderate and good in 55%, 15% and 5% of the patients, respectively. After therapy, 75% of the patients improved their appetite. Along with their appetite improvement, the patients also gained weight for 3.6 kgs on the average.

It may be concluded that:

1. Nutritional advice combined with the pharmacological treatment resulted in a significant increase of appetite in all of the patients $p < 0.01$ assessed by VAS.
2. The decrease in body weight was suppressed and the average weight gain of 3.6 kg was obtained.
3. The reported effects were most prominent 4-6 weeks after the start of supportive treatment.
4. High PG-SGA scores were reported in 30%, while in 70% of the studied patients the PG-SGA score was low.

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