

## Alterations in muscle strength among patients with GI cancers receiving oral nutritional support as soon as malnutrition was detected: ONMUS study.

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**Background:** The main goal of our multicenter study, focusing on patients with gastrointestinal (GI) cancers receiving nutritional support, was to monitor the alterations in muscle strength among individuals who began oral nutritional support (ONS) as soon as malnutrition was detected. Additionally, our study had secondary objectives, which included assessing the adherence to ONS, examining the impact of ONS on anthropometric measurements, analyzing chemotherapy compliance, and evaluating the overall quality of life. **Methods:** The ONMUS study was conducted at 8 centers in Turkey. The study aimed to involve patients with GI cancer who had used ONS for a minimum of 1 week and had an ECOG performance score of 0–1. Patients underwent evaluations by both a dietitian and an oncologist during the baseline visit, as well as at the 2nd and 3rd month visits. Various parameters, including age, gender, performance status, disease stage, treatment adherence, food consumption records, anthropometric measurements, muscle function measured with a handgrip device, and quality of life scales, were assessed. **Results:** The study comprised 426 patients. The median age was 62 years, with a range spanning from 19 to 90 years. Colorectal cancer was the primary diagnosis in 51% of the patients, while hepatobiliary, gastric, esophageal, and small bowel cancers accounted for 20.9%, 20.7%, 6.5%, and 1% of cases, respectively. A significant majority, 78.2% (n=319), of the patients were diagnosed at stage 4, and nearly all, 99.3% (n=411), were undergoing chemotherapy. Patients who adhered to ONS at or above 75% of the recommended usage were categorized as compliant. Among this group, there was a significant increase in body mass index ( $P=0.005$ ). Handgrip measurements for assessing muscle strength demonstrated a statistically significant increase, with handgrip weight rising from  $24.9 \pm 8.9$  kg at the first visit to  $26.1 \pm 8.9$  kg at the third visit ( $P=0.009$ ). ONS-compliant patients also showed statistically significant improvements in weight, total body water, basal metabolic rate, and calf circumference measurements. The proportion of ONS-compliant patients decreased from 80.5% (n=343) at the first visit to 62.4% (n=93) at the third visit. Additionally, a statistically significant improvement was observed in food consumption records ( $P=0.004$ ). In assessments using the EORTC QLQ-C30, there were significant improvements noted in general health status, fatigue, pain, and insomnia scales, as well as in physical, emotional, and social functioning. Furthermore, a significant difference was identified between visits 1 and 2 in PG-SGA scoring ( $P<0.001$ ). **Conclusions:** ONS compliance is evident in the significant improvement observed in muscle strength, anthropometric measurements, and quality of life data. The importance of addressing malnutrition in patients with GI cancer cannot be overstated. Therefore, it is imperative to maintain regular monitoring of their nutritional status and adherence to ONS. Research Sponsor: None.