Current prospects for nutraceutical in integrative cancer treatment and prevention (III)

Total nutritional intervention with conventional anticancer drugs can provide a synergistic effect to improve treatment efficacy on triple negative breast cancer

Triple negative breast cancer (TNBC) refers to a type of cancer that tests negative for estrogen receptors, progesterone receptors, and HER2 protein receptors. These results mean that the growth of the cancer is not fueled by hormones, or by the HER2 protein. Therefore, triple-negative breast cancer does not respond well to hormonal therapies or medicines that target HER2 protein receptors. About 10 to 20% of breast cancers are triple-negative, and considered to be more aggressive with a poorer prognosis than other types of breast cancer. This is mainly because there are fewer targeted medicines that treat triple-negative breast cancer and this type of cancer cell easily develops drug-resistance. Triple negative breast cancer patients have a higher risk of metastasis and cachexia associated with lean muscle loss, and other comorbidities. According to statistics, about 80% of TNBC patients will experience more toxic effects from treatment and thus are at a higher risk of mortality.

“Adjuvant therapy is needed for TNBC patients for cachexia prevention and prognosis improvement.” Professor Chih-Hung Guo from the Department of Nutrition, Hung-Kuang University said. Professor Guo led a team that conducted an animal study on triple negative breast cancer mice to see if anti-cancer drugs combined with a total nutritional formula can improve drug efficacy and reduce side effects. Results showed that a combination of anticancer drugs and nutrition always provides better outcomes, including: cancer cells apoptosis (inducing cancer stem cell suicide), inhibiting angiogenesis (the formation of new blood vessels) to tumors, reducing metastasis, improving immune sensitivity and the inhibition of tumor cell escape in a dose dependent manner. The intervention of the nutrition therapy also provides a protective effect that improves nutritional status, reduces muscle loss, and prevents sarcopenia.

Total nutritional support is fundamental for improve cancer survival

There is a popular myth that eating too much nutrients feeds cancer and makes it grow faster. However, the truth is that good nutrition is an important part of cancer treatment. Eating the right kinds of foods and supplements before, during, and after treatment can help patients feel better and stay stronger. About 80% of cancer patients will experience severe cachexia due to malnutrition, and while the loss of skeletal muscle mass is the most obvious symptom of cancer cachexia, cardiac muscle is also depleted. Multiple mechanisms are involved in the development of cachexia, including anorexia, decreases in physical activity, and the secretion of host anabolic hormones, as well as an altered host metabolic response resulting in abnormalities in protein, lipid, and carbohydrate metabolism. Cancer cachexia is an insidious syndrome that not only has a dramatic impact on patient quality of life, but is also associated with poor responses to chemotherapy and survival.

Dr. Pei-Hung Chang, director of the Division of Hematology & Oncology at Keelung Chang Gung Memorial Hospital, collected patient data for different types of cancer before and after total nutritional engagement to investigate the benefits of nutritional support on cancer cachexia prevention. Supplementing diets with a total nutritional formula plus a supra-nutritional level of natural fish oil and selenium yeast patients showed decreases in serum inflammatory markers, maintained better muscle mass and body weight, which eventually helps to prevent cancer cachexia.

Dr. Chang recommends cancer patients should have regular personalized nutritional consultation and total nutritional supplementation before, during and after their treatment, to help reduce the risk of cancer cachexia and improve their rate of survival.

Nutraceutical Intervention in Cancer Treatment and Prevention-From Bench to Clinic

Nutraceutical intervention plays a crucial role in Integrative Medicine as demonstrated by the growing number of published papers on the subject. Patient outcomes for cancer, one of the most difficult diseases to-treat, have been shown to improve through the use of nutraceuticals as an adjuvant therapy. Dr. Simon Hsia, the Founder and CEO of New Health and Honorary Chairman of the Taiwan Nutraceutical Association, has dedicated himself to applied nutraceutical research in order to prevent and treat chronic disease and cancer for decades. The conclusions of many experts and scholars’ research results presented at the International Nutraceutical Conference, emphasized that nutraceutical should be the basic and first line treatment for every kind of disease.