

A Case In Which Rice Bran Arabinoxylan Was Used As A Supplemental Treatment When Curing Metastasis To Bones From Lung Cancer

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Rice bran arabinoxylan (MGN-3) can be prepared through partial processing of the soluble hemicellulose fraction of rice bran, a polysaccharide complex obtained from the culture fluid of hyphae of *Lentinus Edodes* fungi, members of the basidiomycotina. There are a number of reports describing activity of MGN-3 in enhancing human NK cell activity after oral administration (Ghoneum, M., *Int. J. Immuno Therapy* 14(1), 1998) and in improving serum lipid levels in rats with STZ-induced diabetes (Ohara, I., *Nutrition Research*, in press).

A case in which a favourable outcome was obtained as a result of using this compound as a supplement in treatment of a lung cancer which had spread from the lungs to a wide area of bones is presented in this report.

The patient in this case was a 67-year-old male. In August, 1996, he had consulted a doctor because of a drastic decrease in body weight and complained of severe coughing and expectoration. The diagnosis was a complication of lung cancer (squamous cell carcinoma) and tuberculosis (*M. tuberculosis*). After preferentially treating the tuberculosis with antibiotics, treatment of the lung cancer by irradiation was initiated in October in parallel with the tuberculosis treatment. In December of the same year, the lower half of his right lung was excised, removing the tumor. After irradiation treatment, he left hospital in January, 1997.

In June of the same year, he consulted the doctor again, complaining of pain in the right breast. After diagnosis by bone scintigram, multiple osteo-metastasis was confirmed. The tumor had spread mainly to the ribs of the right chest, but there was also a wide dispersion to the bones of the entire body. From July, sustained-release morphine was administered as analgesic. Meanwhile, administration of MGN-3 was started at 3g per day from the end of May. From January, 1998, his pain decreased. While MGN-3 was continually administered, the slow-release morphine was gradually reduced and in June, the morphine was stopped altogether. The tumor marker ICPP was 16.8ng/ml when the recurrence was confirmed and gradually reduced to 7.6ng/ml in December 1997 and 6.7ng/ml in June 1998. A remarkable improvement was shown in the bone scintigram and an obvious retraction of the tumor spread to the bones was

confirmed. NK cell activity was as low as 9.0% when the disease recurred but it gradually increased and is now maintained at a high level.

Due to the complicating factor of tuberculosis, complete excision of the tumor was not possible in this case. Owing to the recurrence of the illness in a short time and widespread osteo-metastasis after surgery, a lenitive treatment with the chief objective of pain suppression was chosen. In addition, MGN-3 was administered continuously in the expectation that the effectiveness of the remedy would be enhanced by strengthening the level of immune response. As a result of continued administration of MGN-3 for about a year, its efficacy in the improvement in pain, lowered serum tumor markers, raised NK cell activity and retraction of tumor spread to bones was recognised.