
The usefulness of SCC RIA Kit for the measurement of squamous cell carcinoma related antigen (SCC) was studied fundamentally and clinically. A sensitive standard curve was obtained under incubation conditions for 24 h at room temperature. Accuracy and reproducibility of the kit were satisfactory. Excellent recoveries of SCC and linear dilution test were observed.

Serum SCC levels were determined in 35 normal subjects, 85 gynecologic, 21 lung and 10 otolaryngeal cancers (Ca). The average concentration of serum SCC from 35 normal subjects was 1.6±0.4 (SD) ng/ml and 2.4±0.4 ng/ml (m=2SD) was determined as the value of upper normal limit. Among 26 gynecologic malignancy cases, elevated serum SCC was observed in 56% of patients with cervical cancer, and 83% of patients with endometrioid carcinoma. Of 59 benign gynecological disease, only 3 cases had slightly elevated serum SCC levels. Serum SCC levels were elevated in 62% of 13 lung Ca (SCC), 25% of 4 lung Ca (Adeno) and in 63% of 19 otolaryngeal Ca. Serum SCC levels were followed after treatment in patients with high SCC values. A marked reduction of serum SCC (below 2.4±0.4 ng/ml) was observed in 5 patients who had had successful treatment.

Our results indicate that Serum SCC determination is very useful in the diagnosis and follow-up of the patients with cervical Ca, lung Ca (SCC) and otolaryngeal Ca.

FUNDAMENTAL AND CLINICAL EVALUATION ON SERUM NEURON SPECIFIC ENOLASE CONCENTRATION USING RADIOIMMUNOASSAY. M.Nagakura,M.Hara,K.Kushima,R.Sato,Y.Ban,H.Niihama,Y.Manae,O.Ozakii,K.Ito. Showa University, School of Medicine and Ito Hospital, Tokyo.

We report fundamental and clinical evaluation on serum neuron specific enolase (NSE) concentration using RIA. Serum was collected from 2 patients with thyroid cancer and 19 patients with thyroid carcinoma, 41 patients with thyroid carcinoma and 8 patients with Graves' disease. The concentration of anti-NSE and interferon was determined in 78 patients with thyroid carcinoma and 19 patients with Graves' disease. The mean recovery was 100.6%±3.85 (SD), 104.6±5.71 %, respectively. Serum NSE levels on diluted serum was shown lower than 8 tet 10. The crossreactivity between anti-NSE antibodies and CEA, AFP, IAP, EPA and CA19-9 was absent. On healthy subjects, the mean NSE level was 3.5±0.97 ng/ml. It was determined on cutoff level of serum NSE at 8 ng/ml. Ten patients with lung carcinoma positive rate of NSE was 37%, on patients with thyroid carcinoma the rate was 28%. On patients with benign thyroid tumor and Graves' disease the NSE level was normal. Then we compared with EDTA plasma and serum NSE level. On normal subjects, both level was not significant. But on six patients with thyroid carcinoma plasma NSE level was significant higher than serum NSE level. From these data, we concluded that plasma NSE level was clinical useful on patients with thyroid carcinoma.

FUNDAMENTAL AND CLINICAL EVALUATION OF SERUM NSE RADIOIMMUNOASSAY AS A TUMOR MARKER FOR LUNG CARCINOMA. M.Suehiro, M.Murakami, A.Nishikawa, J.Ishimura, M.Fukuchi. Division of Nuclear Medicine, Rl Center, Hyogo College of Medicine, Nishinomiya, Hyogo.

Serum-specific enolase (NSE) radioimmunoassay (RIA) was studied for a tumor marker of the lung carcinoma. NSE RIA used was a Pharmacia NSE RIA system. The followings fundamental data were obtained in this series. The minimal detectable dose of NSE was 1.2 μg/L; recovery of NSE added to the serum was 101.4 %; inter-assay variance was less than 4.7 % (C.V.) and intra-assay variance was 1.3–5.4 %. Serum levels of NSE were determined in 78 normal subjects, 38 patients with benign lung diseases and 37 patients with lung carcinoma. The mean NSE level in normal subjects was 6.0±2.1 μg/L, in patients with benign lung diseases was 7.0±2.2 μg/L, and in patients with lung carcinoma was 13.5±19.5 μg/L. Small cell carcinoma:28.0±33.3 μg/L, large cell carcinoma:9.1±3.5 μg/L, adenocarcinoma:6.7±2.3 μg/L, squamous cell carcinoma:6.9±1.4 μg/L. In addition, the treatment have a good effect on the patients serum NSE levels was increased significantly during chemotherapy or with radiation therapy.

From these data suggested that the serum NSE measurement was useful as a tumor marker for lung carcinoma such as small cell carcinoma.