90

FUNDAMENTAL AND CLINICAL STUDY ON SCC RIA KIT.

Y.Habuchi,T.Hamazaki,S.Bito,M.Hino, K.Ikekubo,M.Ikeuchi,H.Takashima,S.Taniguchi and J.Nakai. Kobe General Hospital,Kobe.

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 of concentration of serum SCC from 35 normal subjects was 1.6±0.4(SD)ng/ml and 2.4ng/ml (m+2SD) was determined the value of upper normal limit. Among 26 gynecologic malignant cases, elevated serum SCC was observed in 56% of 18 untreated cervical Ca and all 2 sarcoma. Of 59 benign gynecological disease, only 3 cases had slightly elevated serum SCC levels. Serum SCC leves 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 7 patients with high SCC values. A marked reduction of serum SCC(below 2.4ng/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.

91

CLINICAL EVALUATION OF SERUM TA-4 LEVELS IN PRIMARY LUNG CANCER.

K.Mukouda,T.Nakanishi,M.Sasaki.Clinical Radiology. T.Koyama,S.Katsuta.Radiology. Hiroshima University School of Medicine, Hiroshima.

Tumor Antigen Ⅳ(TA-4) extracted from cervical squamous cell carcinoma is reported to be specific tumor marker in squamous cell carcinoma. We measured serum TA-4 levels by radioimmunoassay and evaluated its clinical significance in 132 cases of primary lung cancer. Positive rate of serum TA-4 levels was 39.4% in lung cancer. On the basis of histological types, 30 out of 53 cases of squamous cell carcinoma (56.6%), 13 out of 49 cases of adenocarcinoma,(26.5%)and 6 out of 25 cases of small cell carcinoma (24.0%) were positive. The positivity was significantly higher in squamous cell carcinoma. According to clinical stage, 9 out of 19 cases in stage Ⅰ of squamous cell carcinoma (47.4%) was positive, and correlation between serum TA-4 levels and clinical stage were not observed. Changes of serum TA-4 levels before and after therapy reflected the response to therapy.

From the results obtained, it is suggested that serum TA-4 levels is valuable tumor marker in squamous cell carcinoma, and useful in diagnosis of early stage of squamous cell carcinoma.

92

FUNDAMENTAL AND CLINICAL EVALUATION ON SERUM NEURON SPECIFIC ENOLASE CONCENTRATION USING RADIOIMMUNOASSAY.

H.Nagakura,H.Hara,K.Kushima,R.Sato,Y.Ban, H.Niitani,Y.Manabe,O.Ozaki,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 corrected from 24 healthy subjects, 19 patients with lung cartinoma, 41 patients with thyroid carcinoma and 8 patients with Graves' disease. The coefficient of valiation of intraassay and interassay were 3.3-6.6 and 4.0-6.1 %, respectively. Using two kinds of serum, the mean recoveries were 100.6+3.85 (SD), 104.6+5.71 %, respectively. Serum NSE levels on diluted serum were shown linear to 8 times. The crossreactivity between anti-NSE antibodies and CEA, AFP, IAP, TPA and CA19-9 was absent. On healthy subjects, the mean NSE level was 5.3+0.97 ng/ml. We determined on cutoff level at 8 ng/ml. On patients with lung cartinoma positive rate of NSE was 37%, on patients with thyroid cartinoma the rate was 27%. 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 cartinoma 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 cartinoma.

93

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,RI 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 following 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 7.7% (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 47 patients with lung carcinoma. The mean NSE level in normal subjects was 6.0±1.8 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 ug/L, large cell carcinoma:9.1±3.5 μg/L, adenocarcinoma:6.7±2.3 μg/L, squamous cell carcinoma:8.9±4.1 μg/L. In addition, the treatment have a good effect on the patients serum NSE levels was increased significantly during chemotherapy or/with radiation therpy.

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