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EVALUATION OF NEURON SPECIFIC ENOLASE (NSE) RIA KIT AND CLINICAL APPLICATION.
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Serum NSE concentration is known to rise at neuroendocrine tumours and small cell
tumour(SCLC). Basic evaluation of Pharmacia NSE kit included within assay
effect 3.8-7.1% (c.v.), between assay error 6.5-14.5% (c.v.). Result of dilution test
and recovery test was satisfactory. Hemolysis of the sample makes serum NSE
concentration increased. Serum NSE levels were 5.2±1.3 μg/l in 45 normal
controls. Positive serum NSE levels were observed in patients with SCLC(50.0%),non-
SCLC(11.7%),colorectal carcinoma(25.0%),
pancreas carcinoma(12.5%),biliary treact
carcinoma(9.1%),hepatoma(8.3%),gastric
carcinoma(8.0%). NSE levels in the patients
with SCLC changed in parallel with the
clinical course during the treatments.
Serum NSE seems to be a specific tumor
marker in patients with SCLC.

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CLINICAL SIGNIFICANCE OF MEASUREMENT OF SER-
NUM NEURON SPECIFIC ENOLASE LEVELS IN PATIENTS
WITH LUNG CANCER.
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Kimura,FUGII and T. ISHIMITSU.SHIKOKU
NATIONAL CANCER CENTER HOSPITAL, MATSUYAMA.

Subjects were comprised 100 cases of health-
ly adult, 85 patients with primary lung
cancer, 20 of benign lung disease and 4 of
metastatic lung cancer, serum neuron specific-
enolase (NSE) levels were estimated by
means of NSE RIA kit produced EIKEN radio-
pharma chemical Co. Lt. Normal range of
serum NSE level showed from 4.5 to 10.30(
mean±0.81)ng/ml in 100 healthy adults. The
serum NSE level in patients with small cell
carcinoma was significantly higher than the
mean in patients with other histological
types. Positive rates of serum NSE levels
were 80% in patients with small cell carci-
noma, 54% in patients with adenocarcinoma,
50% in patients with squamous cell carcinoma
and 18% in healthy adults respectively.
According to progress of the staging of
lung cancer patients, serum NSE levels beco-
me increased.

Serum NSE levels seems to be specific marker
in patients with small lung cancer and to
be useful for diagnosis and monitor for
cancer treatment.

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FUNDAMENTAL AND CLINICAL EVALUATION OF THE
MEASUREMENT IN SERUM TISSUE POLYPEPTIDE
ANTIGEN (TPA) BY USING RIA KIT. E.Otsuka.
Yamato City Hospital. Yamato.

TPA had been studied in 1957 by Dr.
Bjorklund and his co-workers. A hemaggluti-
nation inhibition method was developed
mainly as its measurement. Recently, a
radioimmunoassay method is used for routine
determination of TPA in serum and it seems
to be an indicator of tumor development
clinically. In contrast to many other
tumor markers, TPA is elevated in a wide
spectrum of cancer condition.

Prolifigen 125-I RIA kit was utilized for
this studies. As the fundamental studies,
the standard curve, the incubation time and
temperature, the intra- and inter-assay
variation, the dilution test and the re-
covery test were performed.

As the clinical studies, serum TPA values
in 100 normal subjects (Men & women: 20-
60 years) were measured. And serum TPA
values in 100 cases with cancer were mea-
sured. These values were compared with CEA
values as the tumor marker used widely.
Also, the positive rates in a wide variety
of cancer were discussed.

In conclusion, the clinical values of TPA
as the tumor marker are reported.

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TISSUE POLYPEPTIDE ANTIGEN (TPA) IN SERUM AND ASCITES — ANALYSIS OF PATIENTS
WITH VARIOUS DIGESTIVE DISORDERS.
Central Hospital, Kurashiki.

Tissue Polypeptide Antigen (TPA) in serum and ascites was assayed with
Prolifigen TPA-RIA kit in various gastro-
intestinal malignancies, liver and pancreas
cancers and liver cirrhosis. Mean value of
TPA in control group(50 cases) was 60±18
U/l and 100 U/l level was taken as upper
normal limit. The percentage of positive
cases in malignant diseases were 89% in
gastric cancer(28 cases), 73% in colorectal
cancer(11 cases), 73% in pancreatic cancer
(11 cases), 75% in hepatoma(32 cases), 100%
in cholangioma(3 cases) and 50% in gall-
bladder cancer(4 cases). False positives
in benign diseases were 60% in liver
cirrhosis(30 cases) and 31% in chronic
hepatitis(13 cases). Because correlation
between serum levels of TPA and trans-
aminase(GOT and GPT) was very high, care
must be taken for the evaluation of TPA
levels in liver diseases. Detailed analysis
of cases with pancreatic cancer
revealed that positive TPA values and
CA19-9 values were equal and determination
of both of them at the same time gave
better clue for the diagnosis. TPA levels of
ascites were much higher than those in
serum, but ascites in malignancies
contained more TPA than in liver cirrhosis.