

[Igakunoayumi, 150, 493 (1989)]

Human Artrial Natriuretic Peptide in the Plasma from Patients with Duchenne Muscular Dystrophy.

MITSUHIRO OHTA, KIYOE OHTA, TOSHIKO ICHIMURA, YASUKO ITAGAKI,
HIROSHI NISHITANI, KYOZO HAYASHI*

We measured plasma concentration of human α -atrial natriuretic peptide (α -hANP) in 49 patients with progressive muscular dystrophy by the use of a sensitive radioimmunoassay. Plasma levels were significantly higher in 39 patients with Duchenne muscular dystrophy (DMD) than in age-matched healthy controls; and 12 of the 39 patients had abnormally high values. All 2 DMD patients with congestive heart failure showed extremely high α -hANP values. The levels of creatine phosphokinase MB, the marker isoenzyme of cardiomyopathy, was significantly elevated in DMD patients. However, this level was not correlated with plasma α -hANP levels. α -hANP is a valuable marker as a biochemical factor in the diagnosis of heart failure in DMD patients.

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Development of Monoclonal Antibody-Based Enzyme Immunoassay for Human Pancreatic Secretory Trypsin Inhibitor (PSTI) Suitable for Clinical Tests.

MASAYUKI KUROBE, MASAO KOHNO, NOBUO YOSHIDA, KYOZO HAYASHI*

The presently described study was undertaken to modify our solid-phase, two-site enzyme immunoassay method (EIA) for human pancreatic secretory trypsin inhibitor (PSTI) to make it more practical for the quantification of the inhibitor in human body fluids. Peroxidase activity fixed on the solid phase was measured spectrophotometrically with 2,2'-azino-bis(3-ethylbenzthiazoline-6-sulfonic acid) as a coupling reagent. The analytical range of the assay was found from 4 to 1,000 ng/ml when a sample volume of 50 μ l was used, and PSTI levels so measured in serum correlated well with those measured by conventional radioimmunoassay ($n=16$, $r=0.985$, intercept +10.35, and slope 1.12).

[Animal Genetics, 20, 287 (1989)]

Genetic Variants of Phosvitin in Egg Yolk of the Japanese Quail, *Coturnix coturnix japonica*.

HISAKO TANABE, NORIKO OGAWA, KYOZO HAYASHI,* SHINICHI ITO,
YUICHI TANABE

Phosvitin and lipovitellin are two major yolk phosphoproteins, and vitellogenin is a precursor molecule of the two proteins in the plasma of the laying domestic fowl. In this study, phosvitin polymorphism in egg yolk of the Japanese quail was found by horizontal polyacrylamide gradient gel electrophoresis. Six phenotypes of yolk phosvitin designated A, B, C, AB, AC, and BC were observed in a population of 281 birds. Analysis of family data revealed that the phenotypic variation of quail yolk phosvitins was controlled by an autosomal *Pv* locus with three codominant alleles, *Pv^a*, *Pv^b* and *Pv^c*. The gene frequencies of *Pv^a*, *Pv^b* and *Pv^c* were 0.064, 0.824 and 0.112, respectively.