〔Acta Urol. Jpn., 32, 337 (1986)〕

Detection of the Urinary Polyamine by a New Enzymatic Differential Assay (II) Comparison with Conventional Method.

SHUNSUKE SAKAI, YASUHISA ITO, TAKUYA KOIDE, KANHIN TEI,
AKIRA HARA, HIDEO SAWADA*

A new method of determining urinary polyamine concentration was compared with other techniques, namely, high pressure liquid chromatography (HPLC) and a polyamine test-enzyme kit. The values obtained by the new method, HPLC, and polymine test-enzyme kit correlated well for all the fractions: diamine, spermidine and spermine. The correlation between the new method and the polyamine test-enzyme kit gave $r=0.9702$, $y=1.1359 \pm 5.1266$ $(n=48)$.

〔Acta Urol. Jpn., 32, 343 (1986)〕

Detection of the Urinary Polyamine by a New Enzymatic Differential Assay (III) Studies on Urinary Polyamines in Patients with Genitourinary Malignant Diseases.

SHUNSUKE SAKAI, YASUHISA ITO, TAKUYA KOIDE, KANHIN TEI,
AKIRA HARA, HIDEO SAWADA*

Using the new enzymatic method, diamine, spermidine and spermine in urine were determined in 56 patients with genitourinary cancer and in 63 controls consisting of 20 normal subjects, 25 patients with benign urological disease and 18 patients with BPH. In early diagnose, diamine level was high in renal cell cancer and spermidine in prostatic cancer. The level of one of the three polyamines was elevated in patients with renal cell cancer (57%), pelvic and ureter cancer (20%), bladder cancer (30%) and prostatic cancer (40%). These results seems to support the usefulness of the new method.

〔Acta Urol. Jpn., 32, 913 (1986)〕

Detection of Polyamines by a New Enzymatic Differential Assay (4) Fundamental Study on a New Enzymatic Differential Assay of Blood.

TAKUYA KOIDE, SHUNSUKE SAKAI, AKIHISA TAKEDA, TATSUO DOI,
KANHI TEI, AKIRA HARA, HIDEO SAWADA*

The enzymatic method for isolation and determination of urinary polyamines was modified to measure diamine, spermidine and spermine in blood. High recovery rates of 96-104%, excellent linearity and within-run precision were demonstrated. A close correlation between this enzymatic method and that by high pressure liquid chromatography was also observed : diamine $r=0.8824$, spermidine $r=0.9878$ and spermine $r=0.9764$.