administration of 2-deoxyglucose (2-DG) in a
dose of 100 mg/kg.
1) Hepatic clearance value of endogenous gastrin
was 102±2.2% during the control period, and
was ranged from 99.2±2.5% to 107.0±2.2%
after intravenous administration of 2-DG.
2) The extraction rate of small intestine was 19.2±
11.2% during the control period, and was
29.3±14.1% in stimulating time.
3) The extraction rate of kidney was 33.3% during
the control period, and was 27.6±13.4% in
stimulating time.

Radioimmunoassay of Secretin
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Radioimmunoassay of secretin has been studied
by using synthetic secretins. Antiserum was pro-
duced in 3 rabbits against synthetic porcine secretin
(Schwarz-Mann Co.). After 4 consecutive immu-
nizations, specific antibody was detected in
all 3 animals through both binding reaction and
biologic inhibition (by Dr. Tachibana, Eisai ph.
Lab.).

Radioiodination of synthetic 6-Tyrosil secretin,
(Schwarz-Mann Co.) was performed by a modified
chloramine-T method-reduced reaction time (30
sec.) with chloramide T and whole procedures
under cold condition. A Sephadex G-25 column
(1.2×20 cm) was used for the separation. The
initial (organic) elution radioactivity peak with
0.1N HCl was collected and stored at −20°C.
Labeling efficiencies of 200 to 250 μCi per μg
were achieved. After storage, significant generation
of damaged hormone was observed by Sephadex
G-50 gel chromatography. For the removal of the
damaged, Talc method was found suitable. Undam-
daged hormones were absorbed effectively to
the Talc and then extracted by acetic acid ace-
tone. Using these antiserum, labeled 6-Tyrosil
secretin and standard secretin of Schwarz-Mann
Co. origin, possibility of a radio-immunoassay
system was investigated. An unequilibrated incu-
bation system was employed for 5 days including
preincubation of 3 days, and charcoal dextran
absorption system was used for B.F separation.
An antibody which gave 1.0 of B/F ratio at ×
5,000 final dilution was used. This antibody did not
cross significantly with synthetic human gastrin
I and cholecystokinin-pancrezymin (both up to
1 μg). The system could detect 80 pg/tube of secre-
tin which was considered too low to access resting
level of circulating secretin. Recently, a highly
potent antiserum was obtained (a kind gift from
Dr. Chey Rochester), which gave 1.0 of B/F ratio
at × 600,000 final dilution. Utilization of this
antibody and labeled synthetic secretin (Sqnibb
Co.) gave high sensitivity detectable of 25 to
50 pg/ml secretin. This seems quite applicable for
clinical study, and further studies will be per-
formed using this new system.