# 1405

MEASURE HB-S ANTIGEN,ANTIBODY OF STANDARD SAMPLES AND REAGENTS IN RADIOASSAY KITS.

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We used the Ausria II-125 kit(Abbott Laboratoris)for HBs antigen test and the Ausab kit for HBs antibody test. 134 samples in 34 radioassay kits were measured. 7 samples of them were positive of HBs antigen and 199 samples of them were positive of HBs antibody. 6 samples of the seven positive HBs antigen samples were the rabbit serum used as second antibody. However the HBs antigen found in these six samples was a non-specific bound antigen proved by the ascertainment test with human HBs antibody. We also made an attempt to see the specificity of 199 positive HBs antibody samples by the method of HBs antibody ascertainment test,but the result was uncertain. 13 samples of the control survey sera were also measured. 2 samples of them were positive of HBs antigen,11 samples of them were positive of HBs antibody, but the ascertainment test was not done for these samples.
These data suggests that standard samples and reagents in radioassay kits were not contaminated with HBs antigen.

# 1406

EXAMINATION OF QUANTITATIVE ASSAY OF HEPATITIS B SURFACE ANTIGEN (HBs-ag).

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The HBV is one of the most important factor which cause to rise hepatitis. We studied quantitative assay of HBs-ag (Ad-type) by RIA and EIA which was high sensitivity. And we examined about concentration of HBs-ag in relation to anti-HBs, HBe-ag, anti-HBe and liver function (GPT).

On a screening test of HBs-ag, RIA was superior to EIA as regards minimum detectable sensitivity. However, a range of straight line of standard curve of RIA was less than EIA. The measurable range of EIA was 5.6 to 80 ng/ml and that of RIA was 1.5 to 30 ng/ml. Watching the concentration of HBs-ag and diseased conditions for a long time on a HBe-ag positive cases, its concentration was very changeable. On a some cases with acute type B hepatitis, when a seroconversion rise from HBe-ag to anti-HBe , the concentration of HBs-ag showed a tendency of decrease. And the variation of the concentration was sometimes correlation with GPT. On a some cases of assymptomatic carrier with HBe-ag for several years, it showed very little variation and GPT was normal range.

This assay was useful for observation of prognosis.

# 1407

THE FUNDAMENTAL STUDY ON THE RADIOIMMUNOASSAY OF PROSTAGLANDINS(PGs).

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The determination of PGs concentration by RIA is often encountered by the problem of cross-reacting PG homologues, and of the facile interconvertion among these homologues. We have developed a new RIA system utilizing a pretreatment technique consisted of the extraction by organic solvent and column chromatography on silicic acid. The specimen was defatted with n-hexane, followed by the PGs extraction into a mixture of ethylacetate-isopropanol-water(7:3:6, v/v/v). The extract was then applied onto the mini-column packed with silicic acid. The eluent employed was a mixed solvent of benzen, ethylacetate, and metanol in variable ratios. The assays of PGs were performed by Clinical Assays' RIA Kits, with the sensitivity of 20 pg/ml. Although the results of dilution tests for urinary PGs have exhibited an excellent linearity, the serum PGs concentrations showed falsely low values when the large specimen volume(over 1 ml) was employed. It seems to be due to the effect of nonspecific interference caused by the coexistent neutral lipids. Using this method, we examined the serum PG-E concentrations in congenital heart diseases; and, significantly high PG levels were observed in some cases of tetralogy of Fallot, cardiomyopathy, and single ventricle.

# 1408

FUNDAMENTAL AND CLINICAL EVALUATION OF HCG RADIOIMMUNOASSAY USING I-125-HCG AND ANTI-BETA-HCG SYSTEM.

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For determining serum, plasma or urine HCG sensitively, we developed a method for radioimmunoassay using I-125-HCG and anti-Beta-HCG system. The specificity of this system shows a minimal cross-reaction with LH (NIH-LER-960) such as 1.0% or less. The sensitivity of this system is about 1.5 mIU/ml. The dilution tests obtained almost desired values. Mean value of recovery test namely added HCG to serum sample is 94.2%. The precision in the performance data(C.V.) were 3.9-5.3% in within-run and 2.3-3.8% in run-to-run. Correlation coefficient between values of this system and I-125-HCG and anti-HCG system was shows as follows; n=77, r=+0.963, y=0.768x - 237. However, correlation coefficient shows a tendency to dissociation in lower HCG concentration area. The other hand, good correlation coefficient was observed between values of this system and I-125-Beta-HCG and anti-Beta-HCG system as follows; n=90, r=+0.999, Y=0.882x + 20.4. In addition, with the use of HCG and Beta-HCG standards, it was possible to develop radioimmunoassay system for the simultaneous measurement of HCG and Beta-HCG in 0.2 ml of same sample.