caused a significant increase in plasma hPRL in all of 10 normal subjects tested, and the peaks were observed 15 or 30 minutes after the injection. Plasma hPRL levels in 3 patients with Sheehan's syndrome and in a patient with oparated chromophobe adenoma tended to be low, and they showed no significant increase in plasma hPRL after TRH injection. Basal plasma hPRL levels in most of patients with hypothalamo-pituitary tumor were tended to be high.

TRH-induced hPRL secretion tended to be impaired in patients receiving long-term and high doses of glucocorticoid.

A Homologous Radioimmunoassay of Human Prolactin

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The radioimmunoassay of human prolactin (hPRL) was performed by the double antibody method using apurified hPRL and anti hPRL [V-S-L (#1) Kit and the Friesen (#1) Kit, National Pituitary Agency, NIA-MDD, USA].

Iodination: A modification of the method of Greenwood et al was used. The labeled hormone with specific activity 60-100Ci/mg was purified by a column chromatography of Biogel P-60 and was repurified by adsorption to Quso G 32 at the time of the assay.

Assay procedure: The assay protocol was as follow. All dilutions were made with 0.01 Mphosphate-saline buffer pH7.8 containing 2% BSA. One hundred μl of serum sample or standard hPRL in PRL free serum obtained from a hypophysectomized patient was added to 100μl of anti-hPRL rabbit serum (1 : 30,000) and 500μl of buffer. The solutions were mixed and incubated at 4°C for 2 days. Then 100μl of ^{125}I labeled hPRL was added. Following the further incubation for 2 days, the second antibody was added to separate bound and free labeled hormones.

Validation of the assay: HGH, FSH, LH, TSH and ACTH up to levels of 1μg, did not interfere with the assay system. Dilution curve for human serum was parallel to the standard curve. The minimal detectable level was 0.1ng/tube (1ng/ml serum) and the coefficient of variations between assays was 15%.

Correlation between V-S-L kit and Friesen kit: The immunological potency of the two standard preparations, V-S-L-hPRL and MRC-Res-Std A 71/222 were compared each other using these two kits. V-S-L-hPRL had a more immunological potency than Res-Std-A when V-S-L kit was used. Whereas Res-Std-A had a more potency in Friesen kit. The value of serum samples assayed in Friesen kit with the Res-Std-A as a reference standard was about two times of that assayed in V-S-L kit with the V-S-L-hPRL as a standard.