173

INFLUENCE OF SERUM IN PATIENTS WITH HYDATIDIFORM MOLE ON IMMUNORADIOMETRIC ASSAY.
H.Hara,Y.Ban,H.Nagakura,K.Kushima,M.Kaihara, R.Sato,H.Niitani, and H.Matsuzaki. The Third Department of Internal Medicine, and Department of Obstetrics and Gynecology of Fujigaoka Hospital, Showa University School of Medicine

It is well known that thyroid function in patients with hydatidiform mole is sometimes hyperthyroid because of human chorionic gonadotropin(HCG), human chorionic thyrotropin, human mole thyrotropin. We studied the influence of serum in patients with it on immunoradiometric assay(IRMA). Sera were obtained from 4 patients with hydatidiform mole, and one patient with it and Graves' disease. TSH levels were given by using IRMA(RIA-gnost TSH Ultrasensitive, SUCROSEP TSH IRMA, TSH RIABEAD II). HCG levels were by radioimmunoassay(Midorijuji). HCG levels were 23,000-340,000mIU/ml before evacuation, and less than 9,600mIU/ml one week after it. TSH levels with RIA-gnost TSH were less than 3.6μU/ml before evacuation, and 0.11-15.9 μU/ml one week after it. When βTSH was absorbed by the coated tube of RIA-gnost, HCG levels were not different from those of unabsorbed serum, and TSH levels were less than 0.08U/ml. TSH levels were linear to each other when diluted serum from 10 times to 100 times, and we thought there was no influence of serum in patients with hydatidiform mole. We concluded that TSH IRMA was useful for serum in patients with chorionic diseases.

175

DISCREPANCIES BETWEEN TRIIODOTHYRONINE UPTAKE AS MEASURED BY ALBUMIN AND CHARCOAL METHODS IN LOW T_3 SYNDROME.
H.Taguchi, K.Hagiwara, A.Nakajima, S.Murakami,H.Kon, and N.Konno. Hokkaido Central Hospital for Social Health Insurance, Sapporo.

Triiodothyronine(T_3) uptake by albumine(AT_3U) and by charcoal(CT_3U) were compared in low T_3 syndrome. Both T_3U values were identical for normal subjects, thyroidal disorders, pregnancy, low TBG, and acute hepatitis with high TBG, whereas AT_3U was significantly higher than CT_3U in low T_3 syndrome ($38.5\pm7.2\%$ vs.$29.4\pm4.9\%$,n=37,$p<0.001$). AT_3U:CT_3U ratio was inversely correlated with TBG($r=-0.518$, $p<0.001$), and with albumin($r=-0.570$,$p<0.001$). Diminution of serum TBG and albumin levels by dilution increased AT_3U more markedly than CT_3U. An addition of albumin to sera lowered AT_3U when both TBG and albumin were low,varying from $50.5\pm0.5\%$ to $46.7\pm0.8\%$ (n=5,$p<0.001$) as the albumin increased from 21.5g/L to 42.0g/L, but this was not seen in sera from normal subject, and pregnancy, and also in CT_3U. The free thyroxine index(FT_4I) was correlated with FT_4 by ultrafiltration method for both AT_3U and CT_3U methods($r=0.672$,$p<0.001$, and $r=0.572$,$p<0.001$,respectively). While FT_4I by CT_3U was misclassified in 48.6% as judged by FT_4 concentration, this was only 20.6% when AT_3U was used(X^2test,$p<0.001$). These results indicate that the AT_3U may be determined primarily by changes in TBG and albumin levels, and FT_4I as calculated by product of AT_3U ratio and T_4 may be more useful than using CT_3U for evaluation of FT_4concentration in low T_3 syndrome in which concomitant decreases in TBG and albumin levels were frequently encountered.