was converted to Δ^4-Androstenedione and excreted in urine as Androsterone and Etiocholanolone.

In patient with acute hepatitis, pregnanediol consisted much larger part of excretory products of progesterone than control and convertion to pregnanetriol and 17-KS fractions seemed to be inhibited probably because of decreased activity of 17-hydroxylase. On the other hand, in patients with cirrhosis of liver, convertion to pregnanetriol nad X-fraction was increased.

Studies on Radioimmunoassay of Human Growth Hormone —Labeling and the Damaged ^{131}I-HGH—

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Interestingly, inverse correlation was obtained between Pt/Pd ratio and serum GPT level. In patients with chronic nephritis, we could not fined any abnormality in progesterone metabolism, but in nephrotic patients, convertion to pregnanetriol and 17-KS fraction was increased.

Iodine-131 labeled human growth hormone (^{131}I-HGH) with specific activities of 180～650 μCi/μgm was prepared by the method of Hunter and Greenwood. This ^{131}I-HGH was further passed through Gephadex G100 column (3.2×35 cm) and the elution pattern, determined by counting 2.5 ml, showed three protein peaks. Standard curve obtained by using ^{131}I-HGH in fraction 3 was the highest in the sensitivity compared with those in other fractions. Immunological activities of ^{131}I-HGH in fraction 1 and 2 to the same antiserum were 23 and 39.5 per cent respectively when compared with the standard curve of ^{131}I-HGH in fraction 3.

The damaged ^{131}I-HGH of initial material, fraction 1, 2 and 3 after one week incubation in buffer, separated by chromatoelectrophoresis, was 24, 23, 26 and 16 per cent respectively. The percentage of the damaged ^{131}I-HGH incubated in buffer was 8.4±4.52 when iodine 131 was used within one day of arrival, but 17.4±6.22 when used after more than two days of arrival. The damaged material incubated in serum was 6.7±2.44 per cent greatin buffer and serum increased as incubation er than those in buffer. This damaged material time was prolonged, but HGH concentrations of the serum obtained by each standard curve in different days of incubation showed no significant difference when the damaged material was adjusted by the method of Parker et al. The damage increased in proportion to the protein concentration in final incubation medium, but there was no significant difference in the HGH concentrations of the serum obtained by each standard curve in different concentrations of final incubation medium.