radiotherapy were also studied.

First, scintigram of the parotid gland was taken 20 minutes after intravenous administration of $Na^{131}I$ (400 μc). Fifty mg. of NaI was given to the patiends for two days just before the administration of the tracer material to block thyroid gland. The functioning parotid gland as well as the submandibular gland were relatively well visualized on the scan, indicating possible clinical application of this method to the scintiscanning of these organs.

In a case with mixed tumor of the left parotid gland, the normal side showed the uptake of 2.3% min. and the tumor side 1.1% min. The excretion rate was −14.7% min. in the normal side and −2.2% min. in the other, showing definite decrease of the function in the affected side. In a case with carcinoma of the left parotid gland, there was a definite decrease of the function in the affected side preoperatively and its complete disappearance was noted postoperatively. In a case with Mikulicz's diseas of the submandibular glands, the uptake as well as the excretion were found decreased bilaterally.

From these results mentioned above, it will be possible to apply this method to the diagnosis of the salivary gland tumor.

Among those with radiotherapy (tele cobalt −60), a case having right upper jaw cancer showed the function of the parotid gland decreased in the affected side after the irradiation of 8,000r. In a case with left upper jaw cancer, the test revealed the function of the left parotid gland decreased after the irradiation of only 500r. In a case having had 12,000r for right upper jaw cancer in the terminal stage, the function of the parotid gland was found decreased in the affected side as well as in the normal side.

From these results, it will be possible that the function of the parotid gland is affected by the radiotherapy.

Studies on ^{131}Triolein, RISA Absorption in Aplastic Anemia and Leukemia

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In patients with aplastic anemia, their nutrition is relatively good in comparison to the hematologic status. As part of studies on fat metabolism in aplastic anemia, ^{131}I-Triolein absorption test was performed.

Radioisotope blood levels in aplastic anemia was rapidly raised and maintained high levels for several hours; 17 per cent or higher at 1 hour after oral administration of ^{131}I-Triolein, and 23.5 per cent at 4 hours which was the maximum level.

But these patients had been receiving prednisolone 10~20 mg. and ACTH 10~20 unit daily for treatment. It was already evident that these medicine increased intestinal absorption of Triolein, so that patients with encephalomalacia being similarly treated with prednisolone and ACTH but with no evidence of gastrointestinal disease were examined.

Their blood radioactivity was also high, but the mean blood peak radioactivity value was 17.6 per cent at 4 hours after oral administration. In normal persons, the peak radioactivity value was 15.5 per cent at 4 hours.

The mean faecal radioactivity value for three days in normal persons was 4.2 per cent with a range of 1 to 8.3 per cent, in aplastic anemia 3.8 per cent with a range of 3.0 to 4.3 per cent, in encephalomalacia under treatment with prednisolone, ACTH, 2.5 per cent with a range of 2.0 to 3.0 per cent.

In RISA absorption test, blood absorption levels in aplastic anemia were higher than that in normal persons. The mean blood peak radioactivity value was 14.5 per cent at 1 hour, three days mean faecal radioactivity was 3.9 per cent in aplastic anemia.

As a result, ^{131}I-Triolein, RISA absorption in aplastic anemia was better than normal persons.

In ^{131}I-Triolein absorption test in patient with chronic myelogenous leukemia, blood radioactivity increased at early times and maintained the normal level. But in acute leukemia, blood radioactivity level was

low and flat, the peak was 5.1 per cent at 6 hours after oral administration.

Faecal radioactivity value for three days was 3.3 per cent in chronic myelogenous leukemia, and 5.4 per cent in acute leukemia.

In acute leukemia, Triolein absorption was rather disturbed in spite of taking large dossage of steroid hormone.

Results of Repeated Risa Test in Cases of Chronic Pancreatitis

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We often repeated the results of Risa test in cases of chronic pancreatitis and, as controls, in cases of varicus diseases of digestive organs.

Results of repeated Risa Test in 28 cases of chronic pancreatitis performed.

Method: The concentration of ^{131}I in blood was examined after oral administration of Risa (100 μCi) with gelatin. (Thyroidal function was blocked by Lugol's solution before the test.)

Cases: 28 cases. Clinical symptoms, Xray examination of digestive canals, amylase level in serum and urine, and various tests of function of gastrointestinal tract, liver and gall bladder were also employed to get exact diagnosis of chromic pancreatitis.

Results: ^{131}I blood level at first test, when clinical symptoms were serious, was moderately or extremely low in a great majority of the cases. At second test, 1~3 months after the first test when clinical symptoms became slighter by treatment of pancreatic digestive agents etc., it recovered almost normal. In cases repeated the test more than three times, ^{131}I blood level ran parallel to clinical symptoms except for a few cases.

Whole Body Retention and Organ Distribution of ^{57}Co-Hydroxocobalamin and ^{60}Co-Cyanocobalamin following Simultaneous Administration with Large Doses in Rat

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Intravenously injected 1,000 microgram of radioactive hydroxocobalamin, when given simultaneously with the same ammount of cyanocobalamin, dissappeared more rapidly from the human blood stream. On the other hand, its urinary excretion in 48 hours was found to be lower than that of cyanocobalamin. This suggested a better whole body retention and tisue uptake of hydroxocobalamin as compared with cyanocobalamin.

To comfirm this assumption, 3 microgram of ^{57}Co-hydroxocobalamin (OH-B_{12}) and ^{60}Co-cyanocobalamin (CN-B_{12}) were given simultaneously in normal albino rats weighning approximately 200 gm. by either intravenous or intramuscular route and radioactivities in the liver, kidneys, spleen, stomach, intestines, heart, lungs and the residual carcase were measured with Well-type scintillation detector at 3, 24, 48 hours, 5, 10 and 20 days after administration. Total radioactivities found in organs plus carcase were regarded to show a calculated whole body retention of both types of vitamin.

The results were as follows; (1) Organ distribution of both vitamins following simultaneous administration showed almost the same pattern as that administered individually, suggesting of no competition of