

chronic pancreatitis and the false obstructive picture of the duct in the tail due to air interposition.

In cases with relatively localized lesions, P-S test was apt to result in abnormality only when they are associated with the obstruction of the duct in the head. Thus, it was found

out that those 3 examinations had their own purposes. It is necessary to evaluate those results collectively together with those of the angiography and the cytology of the direct pancreatic aspirates in order to improve the accuracy of the diagnosis.

¹⁴C-Trioctanoin Digestion Absorption Test

T. BAMBA, M. MASUDA, S. HOSODA, K. KASHIMA, H. AKI,
M. NAKAGAWA, K. KINUGASA, T. HIDAKA

3rd Department of Medicine, Kyoto Prefectural University of Medicine

In rat experiments, the radioactivity curves of expired ¹⁴CO₂ and of incorporated ¹⁴C into various organs in 24 hours after the administration of 5 μ Ci of ¹⁴C-trioctanoin with 0.4ml of trioctanoin, increased to reach a peak at 2 hours (¹⁴CO₂), and 30 minutes (¹⁴C incorporation). Thereafter, the specific activities decreased rapidly. Trioctanoin was metabolized quickly.

Based on the rat experiments, ¹⁴C-trioctanoin digestion absorption tests were performed in human subjects. 5 μ Ci of ¹⁴C-trioctanoin with 8g of trioctanoin were administered orally after overnight fasting, and then ¹⁴CO₂ in exhaled breath were collected in a liquid scintillation counting vial which contained 1ml of 1M hydroxide of hyamine and 2ml of ethanol, with one drop of phenolphthalein solution, with the aid of Sasaki's apparatus, from 30 minutes to 24 hours. In the healthy

subjects, radioactivity increased to reach a peak at 3 hours after trioctanoin intake, but in the subjects with bile flow disturbance, radioactivity had the tendency to reach a lower peak at 6 hours. Maximal specific radioactivity of expired ¹⁴CO₂ was lower in cholecystopathy, pancreatitis, intestinal disorders than in control subjects. Relationship between ¹⁴C-trioctanoin digestion absorption test and ¹³¹I-triolein digestion absorption test was not parallel. The results are seemed to be clearly explained by the fact that the mechanisms of absorption of trioctanoin and that of triolein are different at each stage of digestion and absorption. ¹⁴C-trioctanoin digestion absorption test is useful not only for the diagnosis of malabsorption syndrome, but also for the indication of trioctanoin administration by combination of ¹³¹I-triolein and ¹⁴C-trioctanoin digestion absorption test.