

Patterns of ^{14}C -Incorporation into Fatty Acids by platelets from normal Subjects and Patient in Hyperlipidemia

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In a previous study, we reported ^{14}C incorporation by whole blood from some diseases. The present study demonstrates that platelets from hyperlipidemias incorporate less radioactivity into fatty acids than platelets from controls do and show different pattern of incorporation of ^{14}C into fatty acids when compared to controls.

Procedure: The platelets rich plasma was incubated with five microcuries of $1\text{-}^{14}\text{C}$ acetate for four hours at 37°C . Synthesized acids from $1\text{-}^{14}\text{C}$ acetate were separated by gaschromatography and radioactivity was determined in a liquid scintillation counter (Shimadzu LSG II).

Results: 1) Platelets from hyperlipidemias incorporated 27,438 dpm/ 10^9 platelets in 10 aged arteriosclerotics (group 2) and 16,864 dpm/ 10^9 platelets in 5 adult obese subjects (group 5), while platelets from 4 controls incorporated 43,972 dpm/ 10^9 platelets.

2) Patterns of ^{14}C incorporation into fatty acid are as follow; percentage of ^{14}C incorporation into myristic and palmitic acids was 43.00% in group 2 and 41.5% in group 5, as compared to 60.33% in controls. On the other hand, platelets from hyperlipidemias incorporated 10.77% (group 2) and 10.63% (group 5) of ^{14}C into stearic and oleic acids, while platelets from controls did 6.47%. And, also,

significant increase in percentage of ^{14}C recovered in 20 carbons' and more longer chains' fatty acids of hyperlipidemias comparing with that of controls.

These data demonstrate that fatty acids synthesis by platelets from hyperlipidemias are suppressed, particularly on the cytoplasmic or malonyl Co A pathway (Wakil's), that is equal to the result about fatty acids synthesis of whole blood reported the last meeting by us.

In order to clarify the suppression of fatty acids synthesis in hyperlipidemias, we studied ^{14}C incorporation into fatty acids by platelets, whole blood and liver tissue from lanolin induced hyperlipidemias in rabbits.

The preliminary result demonstrated that ^{14}C incorporations increased in lanolin induced hyperlipidemia compared with control and, moreover, percentage of ^{14}C incorporation into myristic and palmitic acids increased significantly in lanolin induced hyperlipidemia, unexpectedly.

This inconsistent result are not simply explainable. However, if permissible, we may consider that platelets in lanolin induced hyperlipidemia were obligible to increase fatty acids synthesis submitted to homeostasis in contrast to platelets in essential or familiar hyperlipidemia.

Studies on the Intestinal Absorption of the Active Form of Vitamin B_6 in Rats by Use of $\text{PIN-}^{32}\text{P}$ and $^3\text{H-PINP}$

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The intestinal absorption of $\text{PIN-}^{32}\text{P}$, $\text{PAL-}^{32}\text{P}$ and $^3\text{H-PINP}$ in albino rats were studied. The absorption rates of these were calculated from the radioactivities of ^{32}P and ^3H in

gastrointestinal lumen at 30, 60, 120, 180 and 240 minutes after the oral administration of 2 mg of $\text{PIN-}^{32}\text{P}$ or $\text{PAL-}^{32}\text{P}$, or 1 mg of $^3\text{H-PINP}$. The estimation of the radioactivities of