However, there is obsered a slight acceleration in the metabolism in IV type (precirrhosis of the liver) as Deg to be 297.5 mg/kg and TEA 5.058 g/kg. Furthermore, in those cases of acute hepatitis in early stage, i.e. within 3-4 weeks and the stage at which jaundice is present, there is revealed a decline in the albumin metabolism including the decrease of SA.

We make it a rule to administer prednisolone and 6MP for the treatment of liver disease on our clinic, and when we compare the albumin metabolism before and after the treatment we find that by the intermittent administration of 40-20 mg prednisolone the half-life ($T_{1/2}$) is shortened by 10-20% while the rate of decomposition (λ) is accelerated by 11.6-19%, resulting in the increase of 5-10% of Deg. With 7 cases of chronic hepatitis and liver cirrhosis when we administer 50 mg and 75 mg of 6MP intermittently for the period over 4 weeks and compare the albumin metabolism before and after the administration, we find that the decomposition rate (λ) is decreased by $-23.9\sim+8.9\%$, TEA by $-12\sim-27\%$, and also Deg to $-29.2\sim-5.5\%$. While by 75 mg 6MP Deg is decreased by $-5\sim-29\%$, by 50 mg the decrease is by $+2.3\sim-17.5\%$. It iis obvious from this fact that the albumin metabolism is inhibited by 6MP. However, as for the inhibition of albumin synthesis the extent of its change is distributed mostly within the range of $\pm 2\sigma$ of the control group. There can be recognized no difference in the extent of the inhibition of the metabolism by 6MP caused by the type of disease and by the methods of intermittent administration.

Studies on Fatty Acid Metabolism by Using ^{14}C Incorporation
Report III: Pattern of Incorporation of Radioactivity into Fatty Acid from Patients in Hypelipidemia

M. Kibata, I. Iwasaki, Y. Ozaki, Y. Fujii and K. Hiraki
Department o fInternal Medicine, Okayama University Medical School, Okayama

As a part of a series of investigations of formation of lipids by blood cells from normal and arteriosclerotic subjects, we have studied the distribution in certain major lipid fractions of fatty acids formed by white blood cells and effect of linoleate on incorporation of ^{14}C acetate into lipids. Method: After 4 hours incubation at 37°C with 5 μCi ^{14}C acetate Na, lipids were extracted and separated by silisic acid column chromatography. (Hanahan). Finally, we have got fatty acids methyl esters of major lipid fractions—non-esterified, glyceride, sterol and phospholipid fatty acids due to Borgstrom, Metcalf and Hennes.

They were separated by gas liquid chromatography. Peaks were trapped separately and radioactivity was determined. In order to observe effect of linoleate on incorporation of ^{14}C into lipids, two samples of 5 ml. whole blood which were obtained simultaneously, were prepared; the one was control and the other was incubated with 5 ul. of linoleate.

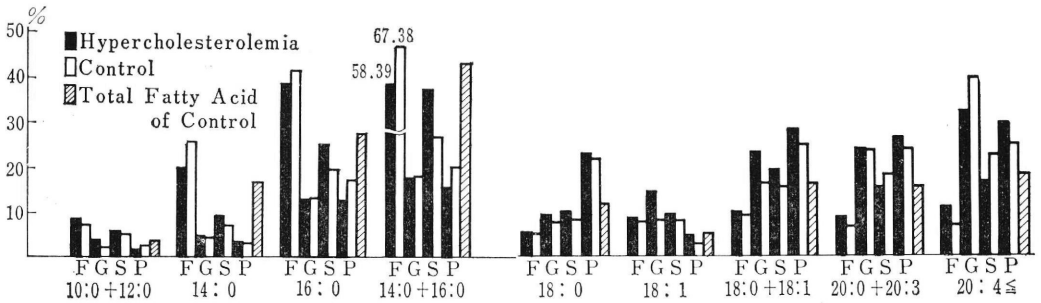
Results: 1. Most cases of arteriosclerotics with hypercholesterolemia incorporated less ^{14}C into fatty acids than control did, and myristic and palmitic acid synthesis was also suppressed. On the other hand, percentage of radioactivity in peaks of stearic, oleic, 20 carbons, fatty acids increased significantly, relatively. 2. Female subjects, though those serum cholesterol might demonstrate high value, incorporated more radioactivity into fatty acid and percentage of ^{14}C incorporation into myristic and palmitic acid increased significantly. 3. Radioactivity in total cholesterol had a tendency to be higher in diabetics than arteriosclerotics or in control. 4. The fatty acids of neutral lipids consistently contained more radioactivity than did the phospholipids. The greatest percentage of ^{14}C was usually in non-esterified fatty acid (50~70%). 5. The pattern of fatty acid radioactivity in each fraction was strikingly

Presented by Medical*Online

distinct (as picture) nonesterified fatty acid had 67.38% of myristic and palmitic acid in control and 58.38% in arteriosclerotics. So we authors think that these fatty acids synthesized by malonyl CoA pathway are most transportable type of fatty acid and a decrease of percentage of radioactivity of this type's fatty acid in arteriosclerotics makes a disturbance of fatty acid metabolism of transportation. Glyceride fatty acid in arteriosclerotics contained 13.55% of oleic acid that was conspicuously higher than control.

This phenomenon is thought to be a key to the hyperlipidemia or the atherogenic state, if this esterification may be difficult to be hydrolysis. Phospholipid incorporated relatively high percentage of stearic acid and unexpectedly low percentage of oleic acid into esters. Then, referring to published data, we have consider that stearic acid combining phospholipid have a high speed of metabolism in our living body. 6. In order to clarify the turn over rate of each fatty acid in each fractions, these results are to be more broadly analyzed, conferring with already published works, if more space to discuss might be endowed. 7. Effect of linoleate preparation, containing 500 mg ethyl linoleate, 0.5 mg vitamin E acetate and 0.25 mg vitamin B_6, on incorporation of ^{14}C acetate into fatty acids and cholesterol was as follows; 1) Incorporation into cholesterol fraction decreased clearly. 2) Fatty acid synthesis diminished in tendency. 3) Percentage of radioactivity in stearic and oleic acid decreased, particularly in oleic acid strikingly, in each major in stearic and oleic acid decreased, partiactivity into fatty acids of phospholipid was rectified to about 20%.

Percentage of Radioactivity in Various Fatty Acid of Major Lipid Classes



Clinical Studies on the Secretion and Metabolism of Androgens using ^{14}C-Dehydroepiandrosterone, ^{3}H-Dehydroepiandrosterone Sulfate and ^{3}H-Testosterone

M. Fukase, T. Kono, T. Yoshimi, T. Kondo, S. Yamada, S. Tatsumi, F. Oseko and K. Hiramori

Department of the Second Internal Medicine of Kyoto University, Kyoto

Plasma dehydroepiandrosterone sulfate (DHA sulfate) was measured in 6 normal subjects (3 males and 3 females) a female pseudohermaphroditism and a patient with hirsutism using the method of Conrad et al., (J. Clin. Invest. Vol. 40, p. 947, 1961) and Baulieu's paper chromatography system (isopropyl ether: benzene: hexane: tert-butanol: ammonium hydroxide: water 20:5:3:12:4:36) for the last purification of the

Presented by Medical*Online