is poor. However, further investigations are required before definite conclusions are drawn about the fate of the vitamin thus absorbed, its metabolism, transfer, storage, utilization or excretion.

ng. = nanogram = millimicrogram.

On the Dose of the Cold Meal in ^{131}I-triolein Test and ^{131}I-oleic Acid Test

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The influence of the dose of the cold meal on fecal excretion was examined in 428 cases of ^{131}I-triolein test and 190 cases of ^{131}I-oleic acid test. Abnormal group (secondary malabsorption) was compared with the control group (other than malabsorption).

Method A represents without cold meal; method B, 0.5 ml/kg and method C, 1.0 ml/kg body weight of cold meal, which consists of pea-nut oil 40 : water 40 : tween-80 3.

Statistical analyses revealed the following. The more the dose of cold meal the higher the fecal excretion in the abnormal group, while no increase was observed in the control group. Therefore, the abnormality was more definitely detected by method C in triolein test, and by method B in oleic acid test. The authors never tried 1.0 ml/kg body weight of cold meal, which consists of oleic acid 40 : water 40 : tween-80 3, because of its rancid dysodorousness and laxativeness.

The authors' criterion of the range of fecal excretion; that is, normal, under 2.0%; border-line, 2.1-4.0%; abnormal, over 4.1%; was reconfirmed by this study.

Clinical and Basic Studies of Radioiodinated Lipids Absorption Test

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This study was performed to reevaluate the radioiodinated lipids absorption test. Cannules were placed in the thoracic duct, portal vein and femoral vein of adult dogs and radioiodinated lipids were administered into the stomach or duodenum. The results are as follows:

Transportation phase of radioiodinated triolein is divided into two shapes. One is the elevation of radioactivity in portal plasma as well as the extent of the elevation of lymph-activity and 10 to 70% of radioactivity of portal plasma and lymph were precipitated by TCA. In another cases the radioactivity appeared predominantly in thoracic duct in comparison with the slight elevation in portal plasma. In these cases more than 90% of radioactivity of thoracic lymph was precipitated by TCA, but only less than 60% of radioactivity was precipitated from femoral

plasma.

The radioactivity labelled on triglyceride in commercial radioiodinated triolein were found to be only 40 to 60% by thin layer chromatography. When commercial radioiodinated triolein was administered into the stomach or duodenum, radioactivity in the plasma of portal and femoral blood was examined chromatographically. The distribution of the radioactivity was found to exist in triglycerides, fatty acids and even phospholipids.

When purified triolein by chromatographic method were administered intraduodenally, radioactivity appeared only in thoracic duct, 99% of which was precipitated by TCA and radioactivity of portal and femoral vein were negligible. 95% of thoracic lymph activity existed in fatty acid and triglyceride.

As a conclusion our animal experiments indicate the strong necessity of the purification of commercial radioiodinated triolein when we performed triolein absorption test, because of the possibility of the false negative result when we use impure materials.

Absorption Test by Iodine-131 Labeled Triolein and Oleic Acid

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In 1960 D. Berkowitz performed the absorption test estimating concentration of ^{131}I-Triolein and Oleic Acid in blood. In 1961 B. D. Pimparka advocated total collection method, but the results were not satisfactory.

N. Tuna in 1963 showed by the thin-layer chromatogram it was because of impure products of ^{131}I-Triolein and Oleic Acid. The purpose of this paper is to report cases examined by the D. Berkowitz's method using the pure products.

Method:

1) The thin-layer chromatogram was performed on each commercial product to estimate its purity.

2) 100 μCi and 25 μCi of ^{131}I-Triolein and Oleic Acid was administered and the blood was obtained at 1, 2, 4, 6, 8, 12 and 24 hours.

Results:

1) ^{131}I-Triolein consisted of chiefly esterized cholesterol, but had very few R.I. on the thin-layer chromatogram.

2) ^{131}I-Oielc Acid had Triolein but had very few R.I.

3) Maximal absorption of 10~15% of Triolein was found at 2—6 hours in normal adults.

There was a case which showed maximal absorption was more than 15% of Oleic Acid.