

Absorption and metabolism of cetylated fatty acid

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Cetyl myristoleate synthesized from cetyl alcohol and myristoleic acid has been found to protect against adjuvant arthritis in rats. The objective of the present study was to observe the absorption and metabolism of cetylated fatty acid (CFA) using ^{14}C -CFA as a trace. Rats were divided into two treatment groups of five. One group received CFA topically (TP) and the other group was gavaged (GV). Lipids were extracted from the plasma, stomach, kidney, small intestinal content, mucosa, and adipose tissue. In addition, lipids were extracted from feces of the gavaged group and a tissue plug of the topically applied animals. Extracted lipids were separated by TLC and absorption and metabolism were quantified by measuring radioactivity. Distribution of the radiolabeled in the tissue examined indicated that CFA is absorbed and metabolized by both forms of delivery. ^{14}C labeled triglyceride was the predominant metabolite in plasma, kidney, liver and adipose, and phospholipid in muscle and mucosa. The major portion of the label was found in the liver in both groups; however total absorption was always higher by gavage. In conclusion it was found that CFA could be absorbed and metabolized by either way of delivery.