

Analysis of Calcium Metabolism in Humans

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(1) Long-term measurements of whole body counts were made on four subjects for 68 to 617 days after intravenous administration of strontium-85

(2) The whole body retention curve were adequately fitted to the sum of three exponential functions as well as the gamma function, but it was unable to express them in terms of the power function.

(3) The parameters of calcium metabolism were derived from the gamma function as follows.

Gamma function

$$Rwb(t) = E^n(E+t)^{-n} \exp(-at)$$

$$Ke(\text{excretion rate coefficient}) =$$

$$\frac{n}{E} + a \left(\frac{E+t}{E} \right)$$

$$Ka(\text{accretion rate coefficient}) = \frac{1}{E}$$

$$Kr(\text{resorption rate coefficient}) = a + \frac{n+1}{E+t}$$

An Experimental Study of the Distribution of Radioiodide Labeled Chinoform

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Today SMON (subacute myelo-optico-neuropathy) seems to be associated with usage of chinoform epidemiologically and experimentally. The purpose of this paper was to study the distribution of radioiodide labeled chinoform in animals.

Albino rabbits weighing about 1 kg were used in this study as experimental animals. The animals were kept in metabolism cages with double screen floors which allowed to collect urine and feces separately. 3 rabbits were given this drug orally in capsule. 2 rabbits were injected intravenously and other 2 were given orally same dose of the drug in Tween 80 emulsion.

Excretion rate of radioactivity in the urine and feces was measured. 300 μ Ci of 131 I labeled chinoform was administered. The

animals were sacrificed at 1, 2, 4, 7, 24, 48, 72 and 96 hours after the administration and the radioactivity in the organs (kidney, liver, spleen, thyroid gland, sciatic nerve, cerebrum etc.) was measured.

Results:

1. In the animals which the radioiodide labeled chinoform in capsules were given orally, 44 to 66 per cent of the total radioactivity was detected in the urine and 26 to 51 per cent in the feces within 72 hours.

2. In the animals which the radioiodide labeled chinoform in Tween 80 emulsion was given orally, 46 to 68 per cent of the total radioactivity was detected in the urine and 14 to 22 per cent in the feces within 72 hours.

3. In the animals which the radioiodide chinoform in Tween 80 emulsion was given