

ministration of ^{59}Fe and ^{55}Fe together with or without 10 g of pancreatin or 2 units of secretin per Kg. of body weight was done to see the effect of these preparations on iron absorption.

In this study faceses was collected for 15 days and analysed by means of wet ashing and electroplating method. The determination of radioactivity was made using a liquid scintillation counter. A caution was taken to

maintain intragastric pH higher than 6 more than 2 hours on administration of pancreatin and ferric ammonium citrate was used.

No definite effect of pancreatin upon the absorption rate was observed either in cases of calcific pancreatitis or control. The administration of secretin, however, yielded nor change in absorption rate or promoted the absorption in some cases.

XI. Heart and Circulation

Normal Values of Radiocardiography with Analog Computer Simulation Studies

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In spite of its atraumatic usefulness to man, radiocardiography(RCG) have only had limited availability, because of difficulty to analyze its related flow and volume phenomenon. With the aid of analog computer studies, the dynamic process of indicator dilution depending on the flow and volume phenomenon in RCG can be expressed as a mathematical model consisting of single mixing chamber in series and time delay. From these analysis, cardiac output(CO), circulating blood volume(BV), heart volume(HV), right and left, respectively(rHV) and(lHV), and pulmonary blood volume(PBV) can be determined simultaneously.

In the first place, the standardization of normal range of these flow and volume values from RCG should be determined. Then from many statistical studies, it might be concluded that all values should be standardized by the relation to the circulating blood volume. Cardiac output itself in normal state from infant to old have the closest proportion to BV as follows;

$$\text{CO} = \text{Heart Rate}(\text{HR} \times \text{Stroke Volume} = \text{HR} (0.0418 \text{ BV} - 10.46) \text{ (ml)})$$

Then other normal values can be predicted as follows;

$$\text{PBV} = 0.107\text{BV}, \text{HV} = 0.106\text{BV}, \text{rHV} = 0.562\text{HV}, \text{lHV} = 0.438\text{HV}.$$