play a rôle although Hotz[4] believed that the decreased function of the bowel in peritonitis was due to gaseous distension.

The action of pituitrin (Fig. 8) occasioned not a little surprise. Doses of 0.5 cc. to 2 cc. of surgical pituitrin intra-muscularly caused no response at all or a depression of the intestinal movements. A dose of 1 cc. intravenously resulted in a reduction of the activity and decrease of the tone. The greater effect appeared to be on the segment of bowel which at the time showed the greater activity regardless of whether this was the obstructed or the unobstructed segment. In some cases the period of inactivity was followed by one of activity but in no case did the secondary activity exceed that prior to the administration of the drug. The same results were obtained in the study of the effect of pituitrin on the normal bowel. Our findings agree with those of McIntosh and Owings[5] who also point out that the literature relative to the effect of pituitrin on the bowel is in disagreement. Further work is needed to clarify the action of this drug on the intestine of man and laboratory animals under normal and pathological conditions.

In conclusion it may be said that the segment of bowel distal to a complete obstruction has a capacity for normal physiological activity and responds to chemical stimuli in a normal manner. This segment of the bowel is normal physiologically as well as anatomically.

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Electrocardiographic Diagnosis of the Artery Occluded in Cardiac Infarction.

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Changes in the electrocardiogram due to cardiac infarction have been noted by many observers, and reports of clinical cases give us our most valuable information because the coronary system in the common laboratory animals does not parallel the human coronary circulation. Thus it is not possible to study the effect of infarction in various parts of the animal heart by laboratory methods and apply these findings to human cases.

[4] Hotz, G., *Mitteil. a. d. Grenzgeb. d. Med. u. Chir.*, 1909, xx, 257.

[5] McIntosh, C. A., and Owings, J. C., *Arch. Surg.*, 1928, xvii, 996.

Parkinson and Bedford[1] noted that in human cases of cardiac infarction they obtained 2 distinct types of curves. They call a curve T_1 type when the R-T alteration occurs in leads I and II, and T_3 type when the R-T alteration occurs in leads II and III. In some of their cases they noted that with one attack they obtained a certain type and during a subsequent attack, the other type.

Barnes and Whitten[2] accurately studied the site of infarction associated with the 2 types of T wave alteration and concluded that infarction in the anterior left ventricle, which is always due to occlusion of the left coronary artery, is commonly associated with the T_1 type of curve; and infarction in the posterior wall of the left ventricle, which is mainly supplied by the right coronary artery as demonstrated by Gross, is associated with the T_3 type of curve.

Observations of the writers may serve to verify these conclusions. The cases presented below demonstrate our findings.

Figure 1 shows a tracing, (T_1 type) encountered in a typical case of cardiac infarction occurring in the anterior wall of the left ventricle due to occlusion of the descending branch of the left coronary artery.

Figure 2 is a tracing recently encountered in which the changes seen in the electrocardiogram are in leads II and III (T_3 type) and in view of the previous tracing and the survey of Barnes and Whitten, a diagnosis of infarction in the posterior left ventricle due to occlusion of the right coronary artery was ventured. Autopsy proved this assumption correct.

The heart was removed one hour after death and injected according to the method of Hill.[3] Figure 4 shows that the left coronary artery (L) fills well.

The right coronary artery (marked by lead bar) fails to fill as far as the posterior descending artery. The main stem of the right artery is faintly visible by X-ray due to the large calcium deposit in the sclerotic artery.

Conclusions. 1. Infarction of the anterior wall of the left ventricle is always associated with occlusion of the left coronary artery. Infarction of the posterior wall of the left ventricle, in the absence of anomalies, is almost always associated with occlusion of the right coronary artery.

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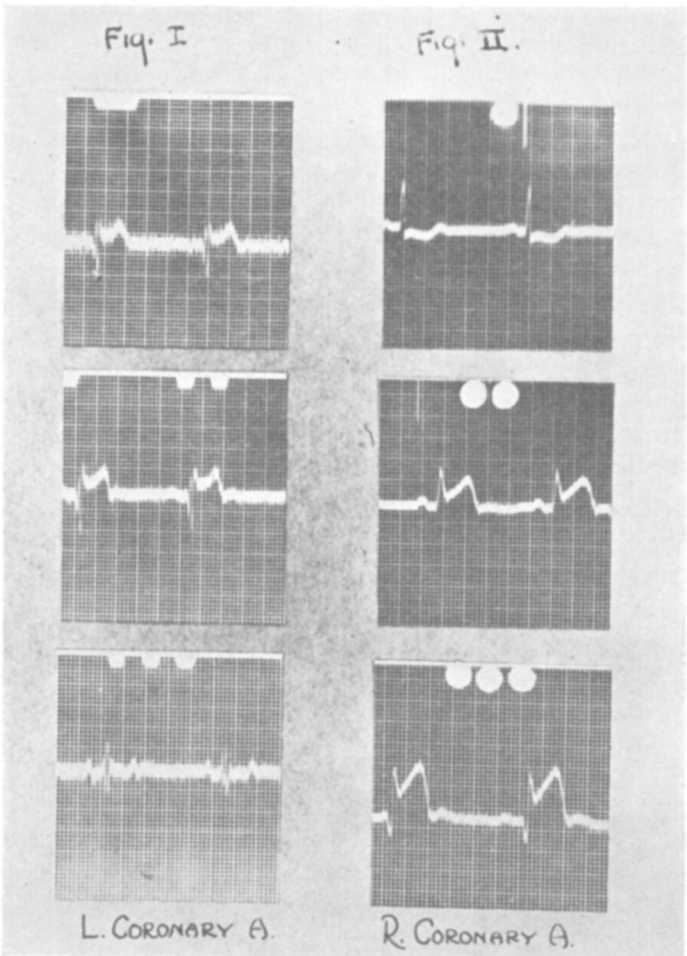
[1] Parkinson and Bedford, *Heart*, 1928, xiv, No. 3.

[2] Barnes and Whitten, *Am. Heart J.*, 1929, v, No. 2. Gross-Monograph on Coronary Circulation.

[3] Hill, E. C., *Johns Hopkins Bull.*, 1929, xliv, 3.



FIGS. 1 and 2.

2. When the infarction involves the anterior wall, the elevation of the R-T segment of the electrocardiogram is in leads I and II, and conversely when in the posterior wall, the elevation of the R-T segment is in leads II and III.

3. Knowing the rôle of the right coronary artery in the supply of the posterior wall of the left ventricle, when we encounter a case of coronary occlusion in which the electrocardiogram shows R-T elevation in leads II and III, we can say with reasonable certainty that the occlusion is in the right coronary artery provided there is no anomaly of that artery.

4. It has been demonstrated that the site of infarction and artery occluded can be accurately located during life.

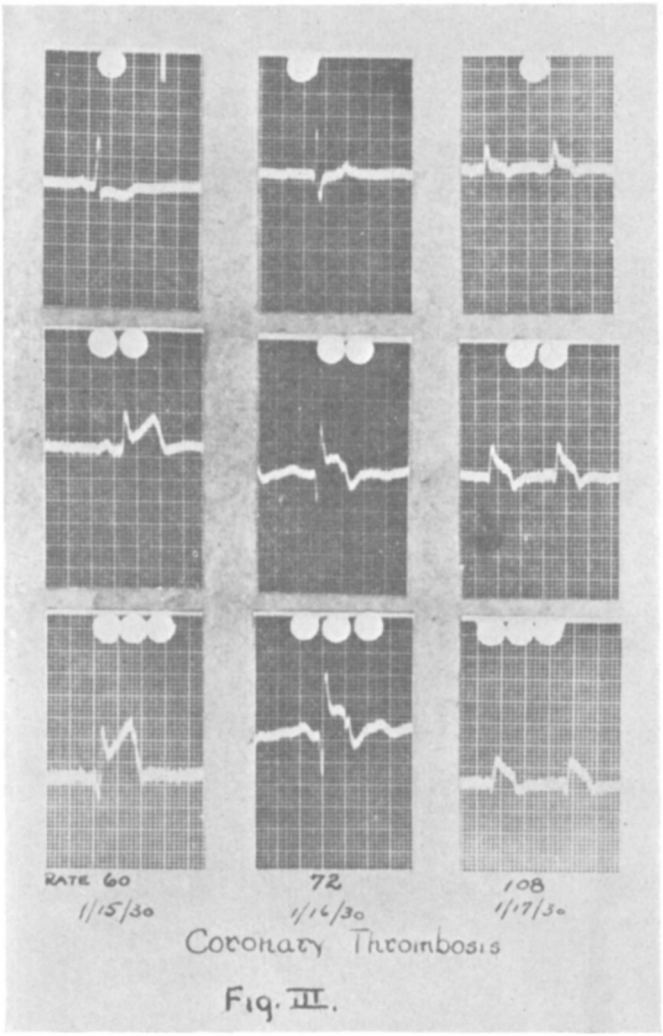


FIG. 3. Daily tracings from onset to death.

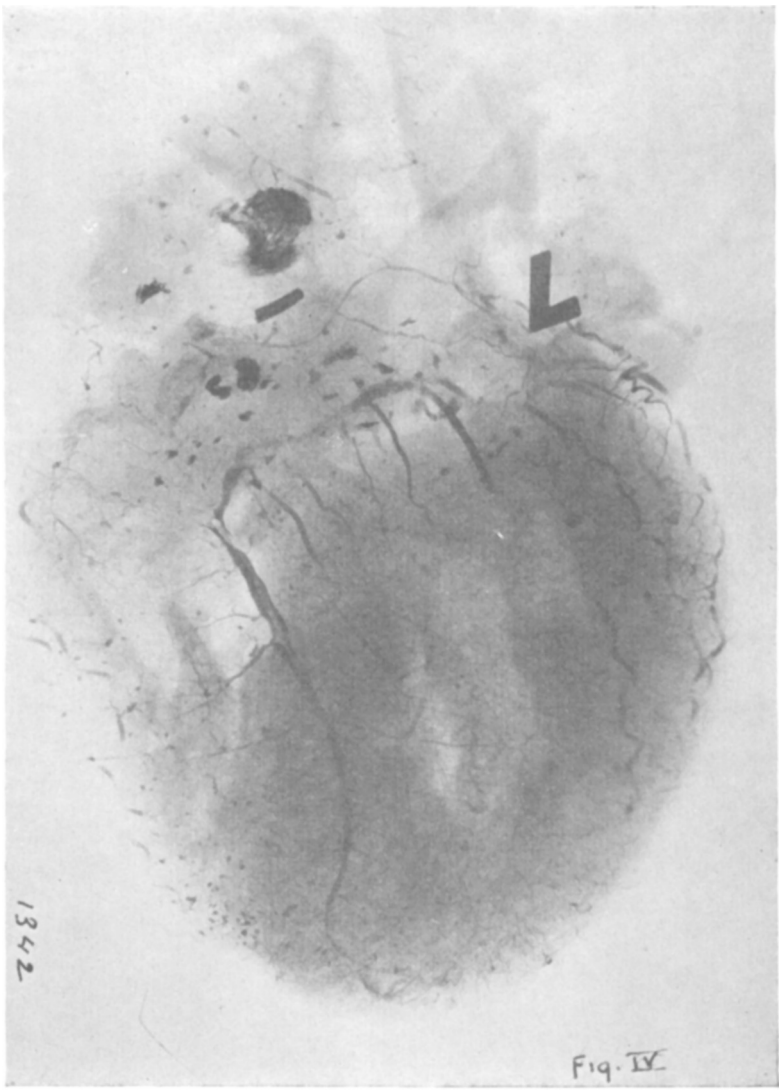


FIG. 4.

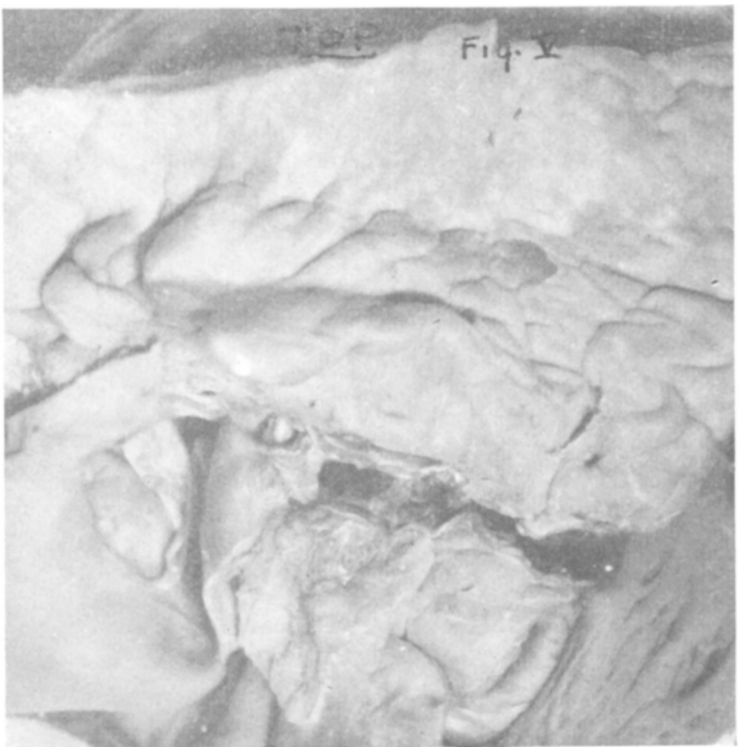


FIG. 5. Right coronary artery opened, showing the thrombus in the vessel.

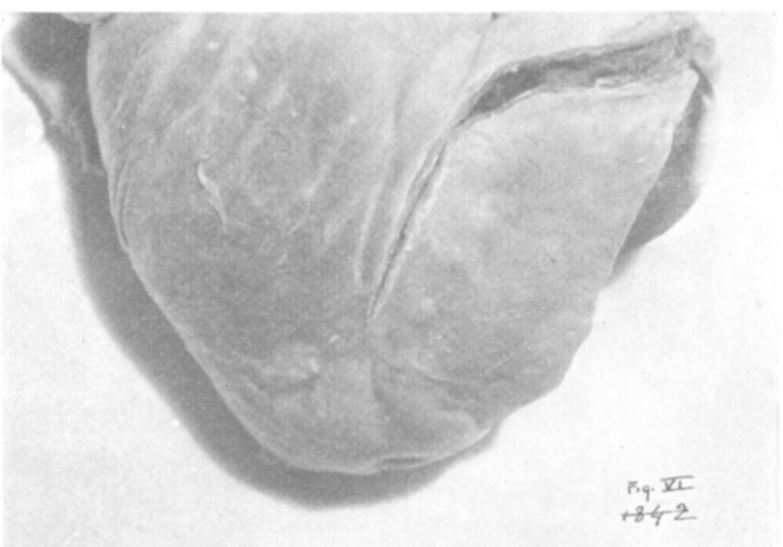


FIG. 6. Posterior wall of the heart, showing thrombus extending as far as the posterior descending artery.