Of twelve dogs in this series ten showed hyaline casts after the magnesium injection; in eight the casts were abundant. They were usually accompanied by a trace of albumin. The casts were most numerous in the two to three hour period, but usually persisted in small numbers until the end of the experiment. Gross examination of the kidneys revealed no significant changes.

The general effects of the absorbed magnesium appeared in dullness and relaxation, partial or complete anesthesia and paralysis, and in one case in a typical "magnesium death" from respiratory paralysis.

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Distribution of solutions in cardiectomized frogs with destroyed or inactive lymph hearts.

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It has been assumed, in various communications from this laboratory,[1] that the distribution of solutions in cardiectomized frogs takes place by way of a peripheral mechanism. Abel,[2] stated later emphatically that this distribution occurs by the pumping activities of the anterior lymph hearts, stating himself, at the same time, that it would be impossible for the posterior lymph hearts to accomplish such an effect. In opposition to Abel's statement, we demonstrated a year ago,[3] at a meeting of this society, that strychnin is capable of producing convulsions in cardiectomized frogs from which the anterior lymph hearts were previously removed. In a recent paper by Abel,[4] he admits the correctness of our contention that strychnin, etc., may become effective even in cardiectomized frogs without anterior lymph hearts. But now he assumes that the distribution is carried on by

[1] *Jour. of Exp. Medicine*, Vol. 13, 1911, p. 542; *Proc. of Royal Society*, B. Vol. 84, p. 99; PROC. OF SOC. FOR EXP. BIOL. AND MEDICINE, Vols. 8 and 9.

[2] Abel, *Jour. of Pharmacology and Exp. Therapeutics*, Vol. 3, 1912, p. 581.

[3] Githens and Meltzer, PROC. OF SOC. FOR EXP. BIOL. AND MEDICINE, Vol. 11, p. 96.

[4] Abel and Turner, *Jour. of Pharm.*, Vol. 6, p. 91, 1914.

the posterior lymph hearts through some delicate collateral vessels. He is again emphatic in his denial of the possibility of distribution through a peripheral mechanism.

In the last few months we have made several series of experiments on completely eviscerated frogs from which all the four lymph hearts were positively excluded. Thoroughly eviscerated frogs in which in addition the four lymph hearts are especially destroyed, are exposed to extreme shock, which profoundly affects the nervous system. Nevertheless, we have observed in a goodly number of these animals the definite appearance of characteristic tetanic convulsions or of unmistakable hyperesthesia after injections of strychnin.

In another series of cardiectomized frogs which were left on ice for several days, adrenalin was injected into the thigh in doses from 1 mg. to 0.1 mg. In all of these cases definite dilatation of the pupils was obtained—a well-known characteristic reaction to adrenalin. The time before the first effect was noticed varied from ten to thirty minutes. Since the lymph hearts stop beating in a comparatively brief time after cardiectomy, especially when the animals are kept on ice, the distribution of the adrenalin from the thigh to the orbit several days after cardiectomy could not have taken place by the aid of the lymph hearts.

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The effect of pituitary substance upon the pulse form of febrile patients.

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In a recent study of dicrotic and monocrotic pulse forms it was shown that these are always accompanied by a transient backward movement of the blood column in the brachial artery just after the entrance of the primary pulse wave. This backward movement may be due either to local conditions in the arm which permit an unusual reflection of the pulse wave or to conditions elsewhere in the cardiovascular apparatus which permit the reflected wave, itself perhaps normal, to become evident on our