

In many instances the intra-arterial injection of oil is followed by a pronounced elevation of arterial pressure. When this occurs the effective venous pressure remains unchanged as long as the heart rate is not modified to a pronounced degree. In some cases the elevation of arterial pressure is accompanied by a marked slowing of the heart, giving the curve an appearance very similar to that following the injection of pituitary extract. From the high level thus reached the pressure gradually returns to normal and, after an hour or so, may reach a level considerably below normal. So far as our observations have gone, however, the pressure never falls as low as 50 mm. of mercury, while the venous pressure is either unchanged or elevated. The animal died in several hours of respiratory failure or from a progressive slowing of the heart, the significance of which has not been determined. The venous pressure at this stage is elevated.

Since neither the intravenous nor the intra-arterial injection of fat produces changes in the dynamics of the entire circulation which are comparable to those found in shock following exposure of the intestine, the hypothesis that fatty emboli, either of the pulmonary or systemic vessels, is the cause of circulatory failure in surgical or traumatic shock is not corroborated by our experiments.

REFERENCES.

1. W. T. PORTER. Fat Embolism a Cause of Shock, *Boston Medical and Surgical Journal*, 1917, 176, 248; Observations sur le choc traumatique, *Compt. rend. Acad. d. sc.*, 1917, 165, 164.
2. W. W. BISSELL. *Jour. Surg., Gynec. and Obst.*, 1917, 25, 8.
3. A. S. WARTHIN. *International Clinics*, 1913, 4, 171.

129 (1307)

Lantern slide demonstration of the effect of magnesium sulphate upon tetanus.

By J. AUER and S. J. MELTZER.

[From the Department of Physiology and Pharmacology of the Rockefeller Institute for Medical Research.]

Four pictures were shown. The first picture was that of a dog five days after it had received tetanus toxin subcutaneously

in the forehead. It showed extreme trismus, opisthotonos and (tonic) tetanus of all four extremities. The second picture was taken after the dog received intravenously a quantity of magnesium sulphate. The mouth was open, no opisthotonos, and the legs fairly relaxed. The third picture shows the same dog after it received a further quantity of magnesium sulphate. All tetanic signs were clearly abolished and the dog was lying on the back and looked well relaxed. In the fourth picture the dog was photographed on the floor. It was lying on the abdomen comfortably relaxed, the lower jaw slightly hanging down, but the head raised and in a normal position. Fifteen minutes later the dog was walking around in the laboratory without much stiffness.

The demonstration shows, first, that magnesium sulphate administered carefully intravenously in 6 per cent. solution is capable of abolishing all tetanic symptoms and, second, that the relaxing effect is not of a curare-like nature.

130 (1308)

Does the thymus gland of mammals when given as food to amphibians exert any specific influence upon the organism?

By E. UHLENHUTH.

[From the Rockefeller Institute.]

1. When thymus is fed to salamander larvæ, this gland does not exert any specific growth-promoting influence.

This is best shown in the curves obtained from the average sizes of four series of *A. tigrinum*. Two of the series were kept in high temperature and two in low temperature and in each temperature one series was fed on thymus and one on normal food (mainly earthworms). The thymus diet did not accelerate growth. (The same fact is shown with the aid of pictures.)

Why other writers have reported faster growth in thymus-fed amphibians will be demonstrated by curves obtained from the average sizes of four series of *A. opacum* (A, B, C, D, 1916). In all four series, the food was given in pieces of approximately the same size and exactly the same quantity. Since a piece of earthworm contains a great deal of indigestible matter, *i. e.*, soil, cuti-