

stated to be three times the circulating plasma volume. Determination of specific gravity of whole blood and plasma, hematocrit, and hemoglobin, in the above cases of shock, before and after the administration of concentrated plasma, showed that the increase in plasma volume took place immediately; and that this increase was much greater than could be accounted for by the volume of fluid injected. This shift of tissue fluids is diametrically opposed to the mechanism of shock.

Reactions were few and consisted of fever, traced chiefly to pyrogens in the diluent, and urticaria.

R. B.

WRIGHT, C. I.: *The Enzymatic Deacetylation of Heroin and Related Morphine Derivatives by Blood Serum*. J. Pharmacol. & Exper. Therap. 71: 164-177 (Feb.) 1941.

Heroin is an acetylated morphine derivative. The sera of some rabbits deacetylate heroin with liberation of morphine. The difference in action of these two substances may thus be partially explained as follows: Hypodermically, morphine is less potent than heroin, as judged by effective clinical doses. This may be due to the fact that morphine is precipitated by the alkaline tissue reaction, and so passes into the blood stream slowly. Heroin is not precipitated as readily, enters the serum more rapidly, and exerts its action, therefore, in smaller concentrations.

If, on the other hand, heroin owes its action to the fact that it is deacetylated to morphine in the serum, then the intravenous injection of the two drugs should reveal morphine to be the more potent substance dose for dose. This is suggested by the following evidence: Intravenous administration of the two substances to rabbits indicates that morphine is five to ten times as toxic as heroin.

R. D. D.

FRIEDMAN, SIDNEY M.: *Effect of Progesterone Anesthesia on Systemic Blood Pressure*. Proc. Soc. Exper. Biol. & Med. 46: 197-198 (Jan.) 1941.

Comparative blood pressure effects of progesterone and nembutal anesthesia were observed. Eight female rats were given 17 to 22 mg. progesterone intraperitoneally and twenty-four hours later " $\frac{1}{10}$  cc. of nembutal solution containing one grain per cubic centimeter." Blood pressure was observed at ten minute intervals until recovery was complete. With both agents, a brief preliminary rise of 10 mm. of mercury was noted immediately after injection. In no case did progesterone depress the blood pressure to any greater degree than nembutal.

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BRUNNER, R., AND SEED, LINDON: *Blood Pressure and Pulse Rate Changes During Thyroidectomy*. Surg., Gynec. & Obst. 70: 731-740 (Apr.) 1940.

During a thyroidectomy for a toxic goiter it is a universal observation that there is a rise in blood pressure and pulse rate due to the thyrotoxicosis itself, and not related to the anesthetic agent. Consequently, the value of routine blood pressure and pulse rate readings during a thyroidectomy is even greater than during other operative procedures. The character of the reaction may determine whether or not the operation is to be started, and once started, if it is to be continued, terminated, or confined to a subtotal resection of one lobe. A survey of 600 anesthetic charts showed certain constantly recurring patterns in the blood pressure and pulse rate curves. Premedication consisted of pentobarbital sodium one to 3 grains, plus morphia sulphate grain  $\frac{1}{8}$  to  $\frac{1}{4}$  and atropine sulphate grain  $\frac{1}{450}$ . Readings of these patients with nontoxic nodular goiters