

days. Fully 95 per cent of them are thrown into severe anaphylactic shock on intravenous injection with 1 cc. horse serum per kilogram of body weight, with fatalities in about 20 per cent of the cases. With 2 cc. horse serum per kilogram of body weight the fatalities are increased to about 40 per cent.

(b) *Goat Serum*: Dogs injected with the same doses of goat serum and tested after the same incubation period are usually not demonstrably hypersensitive. Only about 30 per cent of them give recognizable anaphylactic reactions on intravenous injection with 2 cc. goat serum per kilogram of body weight.

(c) *Egg White*: Dogs injected with the same doses of 50 per cent egg white (Ringer's solution) and tested after the same incubation period, give no suggestion of anaphylaxis, even on intravenous injection with doses as large as 5 cc. 50 per cent egg white per kilogram of body weight.

There is evidently a determining factor in canine protein sensitization of which we are at present wholly ignorant.

### 3505

#### Erythrocyte Anaphylaxis in Dogs.

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Dogs injected intraperitoneally with 0.5 cc. 50 per cent horse erythrocyte suspension per kilogram of body weight followed 24 hours later by an intravenous injection with the same dose, are almost invariably hypersensitive if tested after an incubation period of about 20 days. The shock thus produced, however, differs materially from the shock in canine serum anaphylaxis.

In serum anaphylaxis, the characteristic precipitous fall in arterial blood pressure and the characteristic contraction of the urinary bladder do not begin till at least 45 to 60 seconds after commencing the intravenous protein injection. This is the time necessary for the formation or liberation of histamine-like depressor substances by the hypersensitive liver and their transmission to other parts of the body. In erythrocyte anaphylaxis (Fig. 1) both reactions begin within 15 to 20 seconds after commencing the intravenous corpuscle injection, the same time relations as those observed on intravenous injection with histamine.

It is evident, therefore, that the characteristic reactions in erythrocyte anaphylaxis do not depend upon hepatic function, but are presumably due to immediate humoral or vaso-motor reactions.

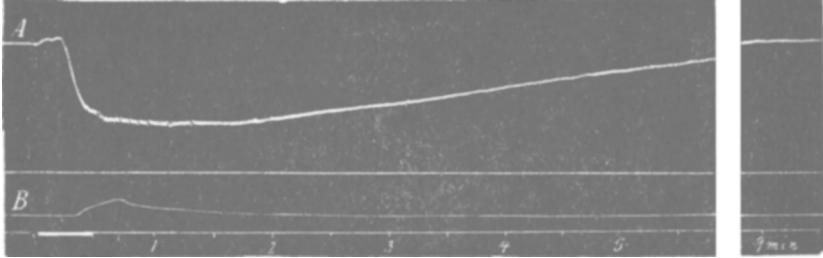


FIG. 1. *Erythrocyte Anaphylaxis in Dogs.*

A, changes in arterial blood pressure (upper base line). B, changes in the tone of the partially inflated urinary bladder, intracystic pressure (lower base line). Heavy base line, intravenous injection 2 cc. 50 per cent corpuscle suspension (Ringer's solution) per kilogram of body weight.

The above tracing represents the maximum reaction we have thus far obtained in canine erythrocyte anaphylaxis, corresponding roughly with the transient clinical symptoms reported by Kritschewsky and Friede.<sup>1</sup>

<sup>1</sup> Kritschewsky, I. L., and Friede, K. A., *Centralbl. f. Bakt.*, Abt. 1, 1925, xvi, 56.

### 3506

#### Effect on Electrocardiogram of Opening Thorax and Inserting Optical Manometers into Aorta and Pulmonary Artery.

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Recently Weinmann and Katz<sup>1</sup> investigated the relation of the T wave to the asynchronous ending of right and left systole. To do this the chest was opened and optical manometers were inserted into the aorta and pulmonary artery. The objection might be raised that such procedures are sufficiently abnormal to make the electrocardiogram noticeably different, and therefore not comparable with the normal. The present report deals with the effect of such procedures on the electrocardiogram.

Meek and Wilson<sup>2</sup> made a comparison of the electrocardiogram