in the circulatory collapse in poisoning from diphtheria toxin is the arteriole and capillary dilatation.

27 (959)

The influence of feeding upon acidosis in the phlorhizinized dog.

By STANLEY R. BENEDICT and EMIL OSTERBERG.

[*From the Department of Chemistry, Cornell University Medical College, New York City.*]

Experiments have been reported by Geelmuyden[1] and by Baer[2] in which they fed protein to dogs under the influence of phlorhizin, and noted a marked drop in the quantity of acetone bodies eliminated in the urine. Lusk[3] has called attention to the fact that the animals used by Geelmuyden and by Baer in their experiments were for the most part, only partially phlorhizinized, and that their results might be explained on the assumption that the protein ingested gave rise to dextrose which was burned in the organism.

In five experiments which we have carried out upon dogs phlorhizinized according to the method of Coolen, we have found a drop of from fifty to ninety per cent. in the quantity of acetone and of oxybutyric acid eliminated, following the ingestion of moderate amounts of protein. A determination of the glucose to nitrogen ratio in the urine showed that the fall in acidosis cannot be accounted for by ascribing it to sugar burned in the organism.

Since acidosis in the phlorhizinized dog can be practically abolished by such an apparently unrelated factor as the ingestion of protein it is obvious that caution should be used in interpreting results of acidosis studies upon phlorhizinized animals.

[1] Geelmuyden, *Zeitschr. f. physiol. Chem.*, 26, p. 381, 1898.

[2] Baer, *Arch. f. exp. Pathol. u. Pharm.*, 51, p. 271, 1904.

[3] Lusk, *Ergebnissee der Physiologie*, 1912, XIII, p. 371.