amount during life in the feces or vomit. It is not found in the esophagus unless the animal has recently vomited. Bile is generally abundantly present in the alimentary canal, usually in the stomach as well as in the intestine. The bile in the gall bladder does not contain blood or blood pigment when the autopsy is performed immediately after death, as was the case in the great majority of our animals.

Marked congestion and extensive hemorrhages are frequently encountered *post mortem* in the mucosa of one part or another of the gastro-intestinal tract (stomach, pyloric end of duodenum, small intestine, especially the upper end, and colon, never in the esophagus). Some congestion is the rule. Marked congestion of the pancreas is frequent.

The beneficial effect of the injections is of course compatible with the idea that in the absence of the adrenals toxic substances accumulate which are responsible for the pathological changes and the symptoms. If these are being eliminated by way of the gastro-intestinal mucosa, it is not difficult to see that the injection of solutions which are known to be in part excreted into the intestine, at least in the first instance, might aid in washing out the toxic substances and in diluting them, so that the concentration necessary to produce symptoms and to cause damage to the gastro-intestinal mucosa or other tissues would not be so easily reached. This is not the only way in which such injections might act. The one thing clear is that they cannot supply the missing cortical hormone if there is one, the absence of which might be specially associated with the disorganization of the digestive mechanism.

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Reaction to Gram's stain by certain spore-forming bacteria.

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It has been customary to consider that the greater number of the spore-forming bacteria are positive in their reaction to Gram's stain. The positive correlation of these two properties has been

considered very nearly perfect with the mesophilic bacteria. It might be expected that the same correlation would be obtained with the thermophilic bacteria. Various investigators working with the spore-forming thermophiles have reported some of these organisms to be Gram negative. The stain was made usually upon cultures at the end of 24 hours', and in some cases 48 hours', incubation. These statements would give further exceptions to the Gram-positive/spore-formation correlation of the bacteria, when their temperature requirements are disregarded.

It has been the experience of the author that some of the spore-forming thermophilic bacteria are Gram negative at the end of 24 hours' incubation. These organisms, however, were positive in younger cultures. Many strains began to lose their power of retaining the violet stain at the end of 8 hours' incubation. Opinion might differ as to whether this would destroy the Gram-positive/spore-formation correlation. The fact, however, that the organisms were positive in young cultures should be sufficient evidence to prove that the correlation is confirmed. It is probable that the change in the staining reaction has a metabolic significance, which might be utilized in systematic bacteriology. It is believed that this characteristic should be investigated and the results recorded with the description of the organism.

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Rôle of the intestinal blood vessels in canine anaphylaxis.

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The stomach, intestines and spleen of dogs were removed without interfering with the hepatic circulation. This was done by connecting the portal vein with the abdominal *vena cava* by means of a transfusion cannula, the return circulation from the hind quarters replacing the normal portal circulation. Dogs thus partially eviscerated give typical anaphylactic reactions on intravenous injection with specific foreign protein, the arterial