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Acute Edema of the Pancreas, Gallbladder and Stomach in Serum Anaphylaxis.

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As far as we are aware, the occurrence of acute edema of the gallbladder, pancreas and stomach has not been described as a consequence of serum anaphylaxis in the dog.

Incidence. In 21 dogs, we observed edema of the pancreas 8 times; edema of the gallbladder-mucosa and adventitia 15 times; and edema of the stomach-submucosa 8 times.

Degree of Edema. This varied considerably; in the *pancreas* the entire gland could be involved so that the lobules were separated by a clear, watery fluid; or the edema was largely limited to that portion closely adherent to the duodenum and antrum.

The lymph glands between the pancreas and stomach were generally black, hard and gorged with blood. Other lymph glands of the viscera appeared normal.

In the gallbladder the edema of the mucosa and adventitia varied between 1 and 3 mm in thickness; the fundus was chiefly involved and the edema was less on the body and apparently absent on the neck of the bladder.

In the stomach, the edema was found chiefly in the submucosa of the antrum and especially of the preantrum, and was most marked along the lesser curvature; the fundus generally showed no edema. In several instances, however, the fundus showed limited areas of edema at least 5 mm in thickness and this edema was associated with definite thickening of the mucosal rugae.

The duodenal submucosa never showed any appreciable edema.

The edema fluid in all instances was water-clear and not bloody.

A few petechial hemorrhages into the gastric mucosa of the fundus were observed in only one dog.

Duration. Some evidence is available indicating that the edema becomes less and disappears as the animal recovers.

It is conceivable that this acute edema of the gallbladder, pancreas and stomach may serve as the starting point of pathological processes or exacerbate existing abnormal conditions in the involved organs.

The dogs weighed approximately 10 kg and were sensitized by either one or several parenteral injections, each of 5 cc horse serum.

The incubation period varied between 21 and 38 days. The re-injection dose was always 20 cc normal horse serum, intravenously. Blood pressure, coagulation time, hemoglobin, etc., were recorded throughout. Ether was discontinued after the blood pressure had reached a low level. Biopsy was performed generally within 30 minutes after the shocking dose of serum.

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Acute Edema of the Pancreas, Gallbladder and Stomach After Histamine Injections.

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Since acute serum anaphylaxis produced well marked edema of some abdominal organs in the dog,¹ it became desirable to test the effect of histamine in this direction, especially as a search of the literature gave no information on this question.

Incidence. In 14 dogs, edema of the pancreas occurred 6 times; edema of the gallbladder 14 times; of the stomach 7 times.

Degree of Edema. This varied as has been described in serum anaphylaxis;¹ on the whole, it seemed not as strong as in the serum dogs, yet it must be noted that occasionally degrees of edema were seen in the pancreas, gallbladder and stomach that were equal to those observed in serum anaphylaxis.

The *location of edema* was the same as in serum anaphylaxis. The edema fluid in all instances was clear and not bloody.

The *lymph glands* between the pancreas and duodenum were brown red in color, and showed red areas on section; they were never black and hard as in serum anaphylaxis.

The dogs were males and weighed between 6 and 8 kg; the histamine hydrochloride was infused into a jugular vein in a 0.1% solution using a Mariotte burette; the dose ranged between 2 and 6 mg per kg. Biopsy was performed within 30 minutes after the fall of blood pressure. Ether was discontinued as soon as the blood pressure had reached a low level.

¹ See preceding article.