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## The pancreatic factor in intestinal obstruction.

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In a previous communication<sup>1</sup> some experiments on the pancreas in relation to intestinal obstruction were reported. This presentation includes a duplication of the work with additional data. Twenty-three dogs were used. The experiments were divided into five groups.

Group I: Duodenal occlusion, pancreatic occlusion,<sup>2</sup> number of dogs, 5.

Average duration of life, 76.6 hours. Observations: A mild toxæmia developed which did not stimulate the toxæmia of duodenal obstruction. Autopsy revealed a slight congestion of the duodenal and colon mucosa. Microscopic examination of the pancreas<sup>3</sup> showed a capillary congestion, nuclei indistinct and the ducts filled with secretion.

Note: An accidental traumatic pancreatitis and a partial devitalization of the oral duodenum was responsible for a severe toxæmia in two of these cases. These variables were not included in estimating the mean duration of life.

Group II: Duodenal occlusion, partial pancreatic resection (duct bearing portion), number of dogs, 3.

Average duration of life, 43.3 hours. Observations: The symptoms of duodenal obstruction were greatly accentuated owing to the associated pancreatitis. Autopsy revealed a congestion of the peritoneum, also a slight congestion of the duodenal and colon mucosa. Fat necrosis was present in each case. Microscopic examination of the pancreas showed a hæmorrhagic infiltration with cells in different degrees of auto-digestion.

Group III: Duodenal occlusion, pancreatic excision, number of dogs, 5.

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<sup>1</sup> Eisberg, H. B., *Annals of Surgery*, 1921, lxxiv, 584.

<sup>2</sup> Sweet, J. E., Peet, Max M., Hendrix, B. M., *Annals of Surgery*, 1916, lxiii, 720.

<sup>3</sup> Fraser, A., Personal communication.

Average duration of life, 70.3 hours. Observation: The severity of the toxæmia of duodenal obstruction is greatly diminished when the pancreas is excised. Autopsy revealed a slight congestion of the mucosa of the duodenum and terminal colon.

Note: A severe toxæmia occurred in two cases; the result of general peritonitis in the one and partial devitalization of the duodenum in the other. These variables were not included in estimating the mean duration of life.

Group IV: Duodenal occlusion, pancreatic excision, pancreatic transplant (auto), number of dogs, 4.

Average duration of life, 29.7 hours. Observation: A severe toxæmia developed within a few hours, the result of devitalized tissue produced by the digestion of the bed of the pancreatic transplant. Autopsy revealed congestion of the peritoneum duodenal and colon mucosa from a slight to a moderate degree.

Group V: Ileal segmental exclusion; bilateral occlusion; reconstruction of intestinal canal; pancreatic tissue (homo) placed within isolated segment<sup>1 2</sup>; number of dogs, 6.

Average duration of life, 35.7 hours. Observations: A severe fulminating toxæmia developed within 18 hours. Autopsy revealed a devitalized segment. A rupture of the segment was found in three animals with resulting fat necrosis and peritonitis.

Note: In one animal the segment remained viable. The resulting toxæmia stimulated duodenal occlusion. The duration of life was 72 hours. This variable was not included in estimating the mean duration of life.

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### A new method of testing liver function with phenoltetrachlorophthalein. III. Clinical report.

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The author's method consists of determining the rate of disappearance from the blood stream of phenoltetrachlorophthalein,