

anemia on the liver of dogs. To produce this anemia, Eck fistulas were made. From five to seven weeks later the abdomen of each dog was reopened, and temporary ligatures placed about the hepatic artery and portal vein. The ligatures were kept in place for from three to twelve hours. The animals were killed from two to six days later.

During the period of ligation, the dogs showed no toxic symptoms. After the release of the ligatures they were in every way apparently normal till the date of the autopsy. The following is a summary of the histological findings:

(a) *Three hour anemias*: No thrombosis. No necrosis or atrophy of the hepatic parenchyma. Moderate degree of fatty degeneration, mainly confined to the central third of the lobule.

(b) *Twelve hour anemias*: No thrombosis. No necrosis. Marked fatty degeneration of the central half of the lobule, with slight atrophy of the parenchyma immediately surrounding the central vein.

From these findings we conclude that the almost total anemia produced by temporary ligation of the hepatic artery and portal vein in Eck fistula dogs, for periods as long as twelve hours, does not cause necrosis of the hepatic parenchyma.

This power of the hepatic cells to resist local anemia probably accounts in large measure for the infrequency of infarcts in the liver, which infrequency is usually attributed solely to the presence of the double hepatic circulation.

Experiments extending over longer periods of time will be reported later.

14 (1596)

An attempt to produce hemochromatosis experimentally.

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The hypothesis is suggested by MacCallum¹ that hemochromatosis may possibly be due to iron retention, secondary to decreased excretion of waste iron by the colon. We have attempted to test this hypothesis by a surgical removal of the colon of dogs.

¹ MacCallum, "Text-Book of Pathology," 1916, p. 112.

This removal was performed in two stages. First, the entire large intestine was separated from the mesentery by means of an abdominal incision, and the abdomen closed. The entire colon was then withdrawn through the anal opening, by a modified Whitehead operation, care being taken not to injure the anal sphincters. The end of the ileum was sutured to the anal mucosa.

After the operation, the dogs were kept on a milk diet for about a week, and then placed on an ordinary mixed diet. Most of the dogs died from shock or intercurrent infections, or were killed for pathological study at the end of from one to two weeks. One dog, however, was kept for three-and-a-half months.

This dog showed a rapid loss of weight during the first two weeks following the operation, after which it slowly gained in weight till the end of the experiment. The dog apparently suffered no inconvenience from the operation, other than that from the frequent passage of semi-liquid stools.

At autopsy this dog showed no pigmentation of the internal organs that could be detected macroscopically. Frozen sections and celloidin sections of the spleen, liver, pancreas, small intestine, kidney, bone-marrow and heart muscle showed no pigment deposits. No iron-containing pigment could be detected in these organs by the Berlin blue reaction.

The total removal of the large intestine in dogs, therefore, apparently does not produce a recognizable degree of haemochromatosis within a period of three-and-a-half months.

Experiments extending over a longer period of time will be reported later.

15 (1597)

Variations in the total cholesterol content of the blood serum in pernicious anaemia and pneumonia.

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Pernicious anemia and pneumonia are pathological states in which the cholesterol content of the blood is known to be altered during the course of the disease. In pernicious anemia, the cholesterol content of the serum is depressed to a varying