Catabolism of gastrin and secretin

Thompson, James C.

Llanos, Osvaldo L.

Teichmann, Reinhard K.

Schafmayer, Anton

Rayford, Phillip L.

In order to determine whether the uptake of gastrin and secretin is limited to specific organ systems (especially the kidney) or whether loss is a nonspecific occurrence across all capillary beds, we have measured the uptake of endogenous and exogenous gastrin and secretin in 32 anesthetized dogs. In 6 dogs, antral irrigation with 0.5% acetylcholine solution produced a brisk increase in gastrin concentrations measured in blood from the aorta. Concentrations in blood from the renal, jugular, and femoral veins were all significantly lower, and there was an integrated uptake of gastrin of 48% by the kidney, 43% by the hind leg, and 36% by the head (the differences were not significant from one another). Exogenous infusion of synthetic human gastrin in 6 dogs at 2 dose levels (0.4?g/kg-h and 0.8?g/kg-h) caused a rise in aortic blood concentration of gastrin with significantly lower levels in blood from the renal, femoral, and jugular veins. Calculated as integrated gastrins, the kidney rem