to use the external jugular vein, the internal jugular vein can be used in a similar manner. The left external jugular vein is more difficult to use because of the angle at which the vein enters the innominate vein.

Samples of blood from the left heart may be obtained from the right carotid artery at the time the external jugular vein is exposed or may be obtained more easily from a femoral artery. The femoral artery in the dog is quite superficial and an arterial puncture is easily and quickly done without any discomfort and with safety if pressure is applied over the artery for a few minutes after the puncture.

192 (2424)

The rôle of the liver in pancreatic secretion.

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Secretin, when injected into dogs under amytal or ether anesthesia, proved far less effective in exciting the pancreatic flow when introduced by the portal vein than when administered by way of the femoral vein, thus confirming an earlier observation.[1] It was likewise found that with extremely potent secretin solutions, the difference in effect by the portal and systemic routes is much less marked than with weaker preparations.

In view of the fact that the secretin when injected by the portal system must first pass through the liver, it may be suggested that this organ in some way is responsible for the different behavior noted above. In order to further investigate this, secretin solutions were injected at a slow rate over a long period of time by each of these routes. When injected at the rate of one-half

[1] Deuel, H. J., Jr., and Cowgill, G. R., presented at the XIth International Physiological Congress, Edinburgh, 1923.

cubic centimeter per minute by the femoral vein, an increased secretion of the pancreatic juice was noted in the first five minute period and a constant maximum response was reached in the third five minute period. On injection of the same secretin preparation at the same rate by the portal vein, no effect could be noted for thirty minutes and the constant maximum flow of the pancreatic juice was not obtained for forty minutes; however, if a second injection of secretin solution at the slow rate was made by the portal immediately following the cessation of the flow as the result of the previous slow injection, an effect on pancreatic secretion was now noted in the second five minute interval and the constant maximum flow was obtained within twenty minutes. This result would indicate that the liver is able to absorb a considerable amount of secretin; when it becomes saturated by an injection of a relatively large amount of this substance, this power of absorption is lost and the effect obtained with secretin injections by the portal more nearly simulates that obtained by the administration by a systemic vein.

A N HCl extract of fresh liver prepared by the methods usually followed in making secretin, gave a potent secretin. That the response of the pancreas following the administration of this fresh liver extract was not due to a vasodilator, is shown by the fact that the HCl extract of liver previously dehydrated with alcohol—a procedure which will remove the vasodilator—still provoked a strong effect on pancreatic secretion.

Just what rôle the liver ordinarily plays in pancreatic secretion can not be stated. That it does not store the secretin in order to prolong the activity of the pancreas seems certain in view of the fact that the response of the pancreas is always of shorter duration when the secretin preparation is injected by the portal than that observed when the same injection is made by the femoral. Obviously this organ must destroy secretin (or eliminate the part stored at such a rate that it is impotent) since the normal liver is found to be desaturated.