fall in venous pressure, the decrease being in harmony with the height of the ureter pressure. A pressure of 20 mm. Hg or less remained ineffective when introduced next to the bladder, but produced a weak retardation of the venous flow when led into the upper portion of the ureter.

On increasing the pressure within the bladder, no effect upon the renal circulation could be noticed, not even when the organ was inflated until it burst.

By injecting solutions of adrenalin into the renal vein centrally to the stromuhr, a retardation of the venous flow was produced. The retardation appeared after an interval of from 7–9 seconds. The experiments speak against the presence of vaso-motor nerves in the central veins.

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Some data regarding the portal circulation.

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The stromuhr referred to in the preceding abstract was used in obtaining quantitative data regarding the portal circulation. The experiments so far performed have given an average flow of 1.56 c.c. per second in the splenic vein (weight of spleen 78 grams) and a flow of 1.05 c.c. per second in the mesenteric.

In the case of the spleen, the veins draining the pyloric end of the stomach and fatty tissue of this region were ligated. The stromuhr was then inserted centrally to the last branch draining this organ. The venous pressure was recorded centrally to the instrument. In the case of the mesenteric the stromuhr was inserted distally to the point of entrance of the vena gastro-lienalis.

The nerves innervating the spleen and intestines were stimulated electrically while the blood flow in the veins was being measured. For the stimulation were selected first of all the entire bulk of the præ or post ganglionic fibers, and later on the most prominent fibers of the post-ganglionic paths.

On stimulation of the post-ganglionic fibers innervating the

spleen (splenic plexus) vaso-constrictory effects of a very pronounced character were obtained. Immediately on stimulation the flow in the splenic vein showed an extraordinary increase which soon gave way to an equally pronounced decrease. The flow regained its normal value sometime after the cessation of the stimulation.

The primary increase in the flow is not due to a vaso-dilation of the splenic blood vessels, but to a squeezing out of the blood "resident" in the spleen. Not until this amount of blood has been expelled by the constricting blood-vessels, can the decrease become evident. Thus, it appears that constrictory effects are obtained from the first when the nerves aforesaid are stimulated.

Although I have tested the vaso-motor power of several of the fibers composing the plexus, I have succeeded in obtaining only vaso-constrictory results.

Similar constrictory effects were incited by stimulation of the præganglionic fibres contained in the left splanchnic nerve.

Vaso-constrictory effects as displayed by a decrease in the flow and a fall in the venous pressure, were also obtained in the mesenteric vein on stimulation of the fibers centrally and distally to the ganglion mesentericum. Upon the evidence contained in the curves, the vaso-motor variations in the flow of the portal vein are said to be of peripheral origin. The portal vein itself possesses no vaso-motor mechanism.

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A clinical viscosimeter.

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A pipette is used having a length of 20 cm. and a diameter of about 0.7 mm. The capacity of the tube, measured from its tip to a point above its enlarged middle portion, amounts to 1 c.c.[1] The tube is connected with a suction-pump developing from 50–100 mm. H_2O ; a T tube is interposed so that the pressure can be measured by means of a water manometer.

[1] Smaller tubes can be used, if the amount of fluid is limited.