

in the axillæ, and thermometers were also inserted here. The room temperature was about 72 deg. F., and the animals were left uncovered. Before irrigation the average axillary temperature was 99 deg. to 99.5 deg. F., and the temperature of the aortic blood 102.5 deg. The normal blood pressure was one hundred and twenty five to one hundred and fifty millimetres. After an interval of about fifteen minutes, irrigation was begun and kept up for twenty minutes, the temperature being increased from 110 deg. to 120 deg. F. It was found that the temperature of the aortic blood rose from 0.5 deg. to 0.8 deg. When cold water was suddenly substituted, the temperature fell and the heart became rapid and feeble. Clinically it had been found that cold rectal irrigations were much safer than the high enemata. Chapin had employed cold enemata in the diarrhœas of children, to reduce the temperature.

EFFECT ON RENAL SECRETION.

The speaker said that, other conditions remaining the same, the secretion of the kidney was increased by a greater quantity of blood flowing through the organ. In his experiments in this direction, the animals had been treated as in the other experiments, but laparotomy had been performed and the ureters catheterized, thus excluding any chance of absorption from the intestine. The bowel was then irrigated with saline solution, the temperature being raised from 100 deg. to 120 deg. F. An increase in the renal secretion was noted in ten minutes, and it was very marked in twenty minutes. The pulse tension was also raised at once. If the temperature of the irrigating fluid was 100 deg. to 102 deg. F., the increase in the secretion did not become noticeable until after about twenty minutes. By adding a little ferrocyanide of potassium to the irrigating fluid, and testing the urine with iron as it came from the ureter, it was ascertained that in twenty minutes the urine gave the Prussian-blue reaction, no matter what the temperature of the fluid, but the higher temperatures were particularly effective in increasing the renal secretion. Small rectal

edemata of saline solution and high irrigation at 100 deg. to 104 deg. F. increased the renal secretion without affecting the blood pressure. As cold irrigation for twenty minutes caused the animal to pass into a condition of severe shock, this method was not applicable to cases of renal insufficiency.

HYPODERMOCLYSIS.

Laparotomy was performed on a dog, and the left ureter catheterized. Five cubic centimetres of ferrocyanide of potassium was then added to three ounces of decinormal saline solution, and this mixture was injected into the tissues of the groin. In three and one-half minutes the Prussian-blue reaction was noted in the urine. Hypodermoclysis should be of value clinically in shock, in cholera, and in acute uræmic suppression to increase the secretion and to dilute the poison.

INFUSION.

A dog was treated as in the last experiment, and then salt solution at a temperature of 110 deg. F. infused slowly into the right femoral vein. In from one and one-half to two minutes the blue reaction was obtained.

ENEMATA.

The high enema was administered through a colon tube, and best with a fountain syringe raised about two or three feet above the patient. The colon tube should be inserted for twelve or eighteen inches, and the fluid allowed to run in slowly. The high enema was employed to relieve fecal impaction, and also tympanites. The quantity should be one to one and one-half quarts, and the temperature 101 deg. to 104 deg. F. A physician in this city had told him that he had secured much better results, in exciting the renal secretion, from an enemata of two ounces of salt to one and one-half quarts of hot water, than from the decinormal saline solution. It should be remembered that the colon of an infant could hold about one pint without distention, and that the adult colon held about nine pints.

DOUBLE-CURRENT IRRIGATION.

In this method he preferred to use his own irrigating-tube—a tube within a tube, with the return current passing through the