TABLE I.

		Dog wt. kilos	Gut length ft.	Strang. time hr.	Peritoneal fluid cc.	Gut wt. gm.	Normal gut wt. gm.	Increase gut wt. %	Total blood loss gm.	Blood volume loss %
Group I	Minimum	8	3.0	2.5	30	260	90	150	260	34
	Maximum	22	5.5	12.0	300	1030	170	490	1015	66
	Average	15	4.3	5.5	96	680	135	283	643	55
Group II	Minimum	11	2.0	2.0	30	240	76	133	180	20
	Maximum	21	5.0	5.5	140	675	150	320	635	50
	Average	15	3.2	4.0	82	460	103	235	425	35
Group III	Minimum	5	1.0	15.0	40	—	—	—	—	48
	Maximum	14	5.0	32.0	325	—	—	—	—	48
	Average	9	2.5	20.0	142	—	—	—	—	22
Group IV	Minimum	8	1.0	15.0	40	—	—	—	—	14
	Maximum	20	4.0	24.0	350	—	—	—	—	30
	Average	15	2.5	20.0	250	—	—	—	—	20

which the arteries are ligated some factors other than whole blood losses must apparently enter in to play the major rôle in the cause of death.

Summary. Data are submitted on 38 animals in which 4 types of strangulation obstruction were produced and followed until death ensued in 3 of the 4 groups. In Group II, the strangulated loops were resected before death, at a time when the animals appeared moribund.

In the first 2 groups in which the veins were occluded, the arteries were patent or only partially occluded. In these groups the animals apparently died from loss of blood into the bowel and peritoneal cavity. In the last 2 groups in which the arterial occlusion was complete the animals lived about 4 times as long, and undoubtedly died from factors other than the loss of whole blood. Just what caused death in these last 2 groups we are unable to say at this time.

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A Technic that Facilitates Lumbar Puncture in the Dog.

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In the last year we studied spinal anesthesia for the dog, and a number of difficulties have been overcome by the utilization of a simple piece of apparatus and the adoption of a certain routine in

making the puncture. Our first problem was the development of a method of maintaining the dog in a proper position for the injection. The vertebral interspaces of the dog are very narrow, as compared to those of man and the insertion of the needle is exceedingly difficult unless the dog is kept in a flexed position. In experiments in which premedication with sedatives is inadvisable we have found that the dog can be kept quiet in a comfortable position by the use of a modification of the Delahanty table. This apparatus is readily prepared by the use of a board measuring 1 inch thick, 12 inches wide and 5 feet long. As in the Delahanty table 4 holes are cut through the board in such a manner that the dog's legs may

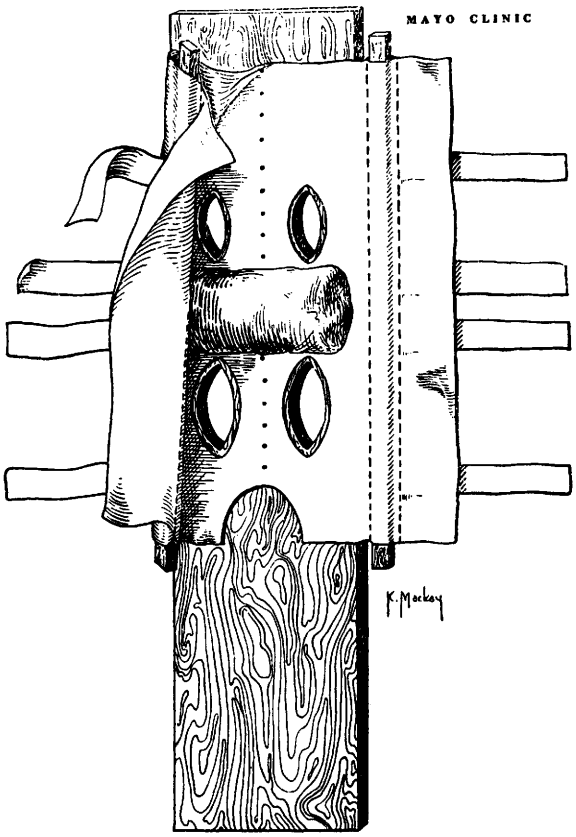

FIG. 1.

A diagram of the essential features of the modified Delahanty table. Four holes are cut through a board 1 foot wide by 5 feet long. The holes are so spaced that the dog's leg can be placed in them. A canvas corset is attached to the board medially. A pillow is placed in front of the hind legs and the corset is drawn about the dog and tied along the dorsum. The pillow maintains the spinal column in a flexed position.

be easily put through them. To insure maximal comfort the holes should be padded. A pillow which maintains the spinal column in a flexed position is placed under the belly. Another pillow is placed between the fore and hind limbs after which the latter are secured. A canvas corset which is attached to the median line of the board is bound about the animal and tied along the dorsum. Lateral movement is reduced by a wooden slat inserted along the corset on each side. By means of this apparatus the dog may be inclined at any desired angle. When the board is placed at an angle of about 45°, flow of spinal fluid is facilitated (Fig. 1). The puncture is preceded by infiltration of the skin and muscles with 0.5% novocain, the injection being carried down to and including the intervertebral space at the level at which the puncture is to be made. A small amount is also injected against and through the dura.

We have found the apparatus and procedure just described of so much assistance that in our hands lumbar puncture in the dog is a relatively easy procedure.

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Direct Observations on the Mechanism of Pain in Duodenal Ulcer.

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An extensive literature has developed with respect to the mechanism of pain in gastric and duodenal ulcer. For this reason, in this brief report, we shall make no reference to previous studies but merely describe some observations made during the course of an operation under local anesthesia upon a patient with a duodenal ulcer.

The patient, a well developed white male 37 years of age, first experienced epigastric distress of the ulcer type in 1920. A diet of bland food together with the daily ingestion of powders (presumably alkalies) afforded some relief, but in April, 1922, his distress became so marked that an operation was advised and performed elsewhere. At operation a duodenal ulcer was found and a posterior gastro-enterostomy done. This gave more or less complete relief until 1924, at which time epigastric pain returned more severe than before and persisted intermittently until we first saw the patient in March, 1928. The symptoms and findings at this time were those of a gastro-jejunal ulcer. In April, 1928, the abdomen was opened