TABLE III.

| Duration of storage in icebox | Liver | | Spleen | | Muscle | |
|---|---|---|---|---|---|---|
| | 0.1 gm. | 0.01 gm. | 0.1 gm. | 0.01 gm. | 0.1 gm. | 0.01 gm. |
| Fresh | + | + | + | + | + | + |
| 2 days | + | + | + | + | + | + |
| 3 " | + | + | + | + | + | + |
| 4 " | + | + | + | + | + | + |
| 5 " | + | + | Uns. | + | + | + |
| 6 " | + | + | + | — | + | + |
| 8 " | — | — | — | — | + | + |
| 10 " | + | + | None left | | + | + |
| 12 " | — | — | | | + | + |
| 14 " | Uns. | + | | | + | + |
| 17 " | — | — | | | + | + |
| 20 " | — | — | | | + | + |
| 22 " | | | | | + | + |
| 24 " | | | | | + | + |
| 29 " | | | | | + | + |
| 33 " | | | | | + | — |
| 35 " | | | | | + | — |
| 38 " | | | | | — | — |
| 42 " | | | | | — | — |
| 46 " | | | | | — | — |

from the liver, no marked difference in the viability of *Bact. tularense* in liver and spleen tissue of rabbits is discernible from our data. These tissues may not be infective on the eighth day after death when stored at 6°C. It appears that rabbit muscle, under the same conditions, will retain its infectivity consistently for about 4 weeks and may be infective for as long as 35 days.

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## Effect of Changes in Environment on Development of the Chick.

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The work of Stockard in varying the normal environment of developing eggs with resulting malformations suggested carrying out similar experiments on a warm blooded animal, such as the chick. The eggs were placed in an incubator for 16 to 18 hours prior to operation. A piece of shell was removed, and in some instances 3 drops of 1/1000 solution of 95% alcohol were added to the side of the embryo, in others, 3 drops of normal saline (both at room and incubator temperatures), while a few eggs were carried along as controls.

At various times, chiefly 48 and 72 hours later, the eggs were reopened and where embryos existed, they were fixed. Photographs were made and then the specimens were sectioned. The control eggs showed no abnormality.

*Results:* Total eggs treated with saline ----------18
Total eggs treated with alcohol----------27

Of these 5 were completed for microscopic study; of them all fail to show a pituitary gland; 4 showed optic defects; 2 showed failure of closure of the head folds and in one no olfactory pits appeared. It made no apparent difference in the results whether the environment was changed with weak alcohol or normal saline solution. The treated embryos exhibited malformations of the nervous system. The abnormalities were chiefly (1) an absence of the pituitary gland, (2) in some an absence of an eye, (3) failure of the head folds to close, (4) in one, an absence of the olfactory pits.

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## Relative Value of Splanchnic and Spinal Analgesia in Treatment of Experimentally Produced Ileus.

ALTON OCHSNER, I. M. GAGE AND R. A. CUTTING.

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In a previous communication[1] we reported the results of splanchnic analgesia in the treatment of experimental ileus, and concluded that this form of treatment is undoubtedly of great value in reestablishing motility in the intestinal wall. The present communication concerns the relative value of splanchnic analgesia and spinal analgesia. Our results are based upon a series of 70 dogs. In 50 animals novocain splanchnic analgesia was produced, and records of the blood pressure, intestinal motility, and respirations were obtained on the kymographic drum. In most of the cases a single tracing of intestinal motility was obtained, and this from the terminal ileum. In some cases, however, additional tracings were obtained from the duodenum and also from the colon. In 9 animals instead of using novocain an aqueous solution of nicotine was used, as advocated by

[1] Ochsner, A., Gage, I. M., and Cutting, R. A., *J. Am. Med. Assn.*, 1928, xc, 1847.