weeks and an injection of adrenalin had no effect upon the pupil. For the last three weeks the dilation of the right pupil had again returned.

On account of the very moderate effect which the intramuscular injection of adrenalin had caused in the left pupil in the last few days, an intravenous injection of adrenalin was tried on this animal for the first time. Not more than 0.3 c.c. of adrenalin (1 : 1000) were given through the ear vein. The right pupil remained unchanged, fairly dilated. *The left pupil became gradually dilated* so that after an hour the dilation was at the maximum. Half an hour later the animal fell over on its side, blood and foam escaping through the mouth and nose. The rabbit died of acute pulmonary edema.

At the autopsy, no sign of a ganglion could be discovered macroscopically on the left side; in the neighborhood of the seat of the ganglion the sympathetic nerve was lost in strands of connective tissue. (The abdominal aorta showed a few sclerotic patches.)

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Intra-abdominal pressures.

By **HAVEN EMERSON.**

[*From the Department of Physiology of Columbia University, at the College of Physicians and Surgeons.*]

Definition:

1. Pressures upon solid viscera.
2. Pressures within hollow viscera.
3. Pressures within blood and lymph vessels.
4. Pressures within the free peritoneal cavity.

Pressures upon solid viscera cannot be other than those present in the free peritoneal cavity.

Pressures within hollow viscera have been fairly established.

Pressures within blood and lymph spaces have been accurately determined.

Pressure within the free peritoneal cavity has been a subject of disagreement since 1865 when Braune declared it was negative.

To determine the normal pressure and its variations within the peritoneal cavity a perforated trocar was used to pierce the abdom-

inal wall. This was connected with a water manometer arranged to record by a float and marker upon a smoked paper.

In dogs the pressure varied from 2–45 mm. of water above atmospheric, *i. e.*, positive.

In cats from 2–20 mm. positive.

In rabbits from 2–25 mm. positive.

In calves from 2–10 mm. positive.

The causes of this persistent but fluctuating positive pressure within the free peritoneal cavity are the tone of the muscular walls of the peritoneal cavity, including the diaphragm and the pelvic floor.

The contraction of the diaphragm is the chief, if not the only factor in the normal rise in pressure during inspiration.

Debilitated states show a low pressure.

Ether anesthesia causes a gradual drop in pressure until with complete loss of muscular tone, the pressure reaches zero.

Curare likewise causes a progressive fall to zero pressure.

Asphyxia develops great rises in pressure during inspiration until muscular relaxation allows a drop to zero just before death.

Excessive pressure artificially produced within the peritoneal cavity causes death from cardiac failure before the obstruction to respiratory excursion has developed a marked asphyxia.

The pressure is the same at all points of the peritoneal cavity, and is subject to identical variations wherever the recording trocar is placed.

The physiological function of these pressure conditions seems to be chiefly in assisting the circulation of blood and lymph, thereby playing an important role in the processes of absorption and elimination which take place within the abdomen.

Clinical observations in diseased conditions are under way.