

Floating liver, however, is very much less frequent than floating kidney, and one cannot be surprised at this when the number and strength of the ligaments which attach the liver to the abdominal walls are considered, as well as the intimate connection between that organ, the inferior vena cava, and the right heart. The distance between the wall of the right auricle and the junction of the hepatic veins with the inferior vena cava varies from one and a quarter to one and three-quarters inches, and it is difficult to conceive how, in any way, this distance could be very much increased.

It is probable that in the ordinary state of health the ligaments of the liver are sufficiently strong to carry the whole weight of the organ without the aid of the abdominal wall. This I have demonstrated in a majority of the few experiments I have made on the cadaver.

The normal position in the recumbent posture was marked by the insertion of pins through the abdominal wall. The subject was then placed on his feet and the lower margin again marked. The abdomen was then opened, the intestines allowed to fall down, and the subject was jarred and shaken. In some cases the anterior margin of the liver did not descend lower after the abdomen was opened than before. In some, however, the liver descended an inch to an inch and a half after the abdomen had been opened. In the latter case it appeared to me that when the atmospheric pressure was removed, the length of the suspensory ligament allowed the liver to drop to the extent noted. After section of the suspensory ligaments, the anterior border of liver descended about three inches, the right lobe more than the left. The posterior margin remained fixed.

In examining the ligamentous attachments, one is struck by the great difference in their strength and thickness in different cases. For instance, in some the lateral ligaments were thick and strong enough apparently to carry the whole weight by themselves, whereas in others they were thin, weak, and easily torn. The fact that in some cases the liver rotates on its axis may be due to the varying strength of these.

In the case of women with pendulous abdomen after childbearing, it is probable that the ligaments of the liver may not have their normal strength, and the heavy weight constantly dragging upon them may in time produce an elongation not only of the ligaments, but of the inferior vena cava.

My clinical observations have been limited to three cases. One, a female, with lax abdomen, belonging to the first class; one, a male, belonging to the second class; and the other a case of subphrenic abscess which really does not belong to either class, but which I include on account of the great displacement of the liver found on post-mortem examination.

CASE I. An old lady, æt. 62 years, mother of ten children, whom I was called to see in 1885, and found suffering from dyspnoea and cyanosis