

THE PLANNING OF ABDOMINAL INCISIONS 5

perfect, no cough troubled the patient, nor did the anaesthetic cause undue strain or vomiting, yet the unpleasant fact remains and has to be faced, a hernia may form in spite of all our care. All scar tissue has a tendency to contract, but this may be overcome, and there are special reasons why a cicatrix should stretch when it enters into the formation of the abdominal wall. In every part of this it is subjected to the action of two forces—(a) intra-abdominal tension, which varies considerably at different times of the day, and tends to a more permanent increase as we get older and more sedentary in our habits, and (b) the action of the muscles of the abdomen, which again is of varying power, and sometimes indeed violent and irregular, in consequence of disease. The intra-abdominal pressure is fairly evenly distributed over the whole of the anterior part of the abdomen, but in addition, over the lower part especially, there is the added weight of the abdominal contents when the patient is either sitting or in the erect position.

It may be asked what kind of incision should be substituted for those through the linea alba and the linea semihilaris. It is obvious that if the rectus muscle can be temporarily displaced to one side during an operation, and put back uninjured in its normal bed after the operation has been finished, there will be no possibility of the development of a hernia at the site of the incision. In the operation for the removal of the appendix which I suggested many years ago, and have practised regularly since, advantage is taken of the anatomical arrangement of the rectus. An opening is made to the inner side of the linea semihilaris through the anterior sheath of the muscle, the muscle itself is drawn inwards with a retractor, the posterior sheath incised, the appendix removed, and the incision sutured. This operation possesses many advantages, not the least important of which is the possibility of extending it to any reasonable distance. Modifications of this method have since been adopted for other operations, the advantages of it being so obvious.

At an appendix operation, if the right ovary or tube be found diseased and requires removal, this can be done through the same incision. Should the left ovary or tube require removal, it can be excised through a similar incision on the