

gitation again occurs, and the motor function of the intestine is incompetent.

There is a feature about the mechanism of the ileo-cæcal valve which requires careful investigation. From what has been said it is evident that the principal force in closing the valve is the intracæcal pressure due to the contraction of the cæcum, while the valve is probably opened by the force of the pressure in the ileum. Two explanations are suggested: (1) That the contraction of the ileum controls the mechanism of the valve, a peristaltic wave forcing the valve open, and as soon as the wave reaches the outlet, the valve closes. (2) That the contractions of the ileum and cæcum are co-ordinated as in the case of the auricle and ventricle. If the latter view should prove to be correct it is probable that the pace-maker of cæcal contraction is situated in the lower end of the ileum. This suggests that in cases of intestinal stasis characterized by regurgitation of the ileo-cæcal valve with compensation broken down, we may in future speak of fibrillation and flutter of the ileum just as we now speak of fibrillation and flutter of the auricle in some incompetent hearts.

I should like in this connection to mention a clinical observation which may have a bearing on the co-ordination of the motor function with that of the cæcum. It is that in marked cases of ileo-stasis of organic origin of the lower end of the ileum characterized by excessive peristalsis of the ileum and impaction of the barium in the ileum against the cæcum, the latter is frequently found empty, although there is frequently barium in the splenic flexure of the colon and rectum. It would appear from this that the excessive peristalsis in the ileum in some way brings about excessive peristalsis of the cæcum. A somewhat similar relationship exists between the stomach and intestine for, in duodenal obstruction due to peptic ulcer, there may be a residue of barium in the stomach after seven hours, and at the same time the small gut practically empty. In these cases there is generally excessive peristalsis of the stomach which in some way produces hypermotility of the small intestine, although the peristaltic wave of the former viscus stops short at the pylorus. In organic obstruction of the pylorus, in the early stage at least, the same phenomena are observed.

Let us now consider for a moment how ileo-cæcal regurgitation may cause gastric disturbance. This is germane to my paper, because ileo-cæcal regurgitation is a common complication of organic obstruction of the ileum. In discussing the subject I may be permitted again to call attention to the rapidity with which, in