

a direct communication between the stomach and colon. The stomach was found to be healthy. The duodenum was dilated, but the ascending colon was normal in size. In commenting afterwards on the results of the *post-mortem* in this case, as regards the mistaken topical diagnosis, Nothnagel said that it was much more difficult to locate exactly diseased processes in the intestines than it was in the brain. He admitted that he could not explain how the ascending colon remained normal in size and free from peristaltic waves during life. He was of the opinion that the communication between the stomach and transverse colon took place about three days before death—at the time that the matters vomited and the stools became dark in color.

In speaking of his experimental studies, Nothnagel said his method of investigation was to keep chloroformed animals (dogs and rabbits), with their abdomens opened, immersed in a bath (100°F.) of a half per cent. solution of common salt. He has demonstrated by this method that, in animals at least, no peristaltic actions occur in uninjured intestines. The effect of injections into the rectum was examined, colored fluid being used. It was found that a small quantity of water had no effect on the peristalsis. A considerable quantity distended the rectum without exciting any action. Iced water caused action sufficient to move the fluid from 15 to 20 centimetres up the bowel. Olive oil had a similar action. A strong solution of common salt, forced up by a syringe a distance of 10 centimetres, was carried up, together with a mass of fæces, by the antiperistalsis to the cæcum. Similar results were obtained by using concentrated solutions of nitrate of potash and bromide of potassium. The common salt injections always caused contractions, which passed both ways. In a case of ileus in the human subject, an injection of colored salt solution, which was used during life, was found, after death, to have reached the cæcum. The conclusions to be derived from these experiments are that in intestines in a healthy condition, or containing only unirritating contents, peristalsis only occurs from above downwards, and if there are any irritating substances in the bowel, antiperistalsis occurs also. To explain the occurrence of fæcal vomiting in intestinal obstruction, ligature of the small