

rated, and shining, like cartilage. The *musculi papillares* of both ventricles were pale and shrunken. Under the microscope, the affected portions of the muscular substance showed the usual appearances of syphilitic myositis. The lungs were adherent in places, partly emphysematous, and contained numerous infarcts. The liver showed a patch of syphilitic interstitial hepatitis in an early stage. The spleen was rather hard and large, and its capsule opaque, and adherent in parts to the thoracic wall. The kidneys were highly congested. The other organs of the body, as well as the large bloodvessels, were normal.—*Brit. Med. Journal*, April 15, 1882.

---

*Fistulous Communications between the Gastro-intestinal Canal and the Chest.*

Dr. H. TILLMANNS reports, in von Langenbeck's *Archiv*, Band xxvii., Heft 1, a case observed by himself and Dr. Neubert of Leipsic, of fistulous communication between the intestinal canal and right pleural cavity. The patient was a lad aged 15, who, on the morning of June 9, 1880, was seized just below his arms by a friend and swung forwards and backwards in sport. After his dinner he vomited twice, and during the following night was taken with acute pain in the right hypochondrium. This pain persisted and increased in severity, and the patient was compelled to lay up. On the ninth day, and after the tenderness in the region of the liver had been slightly relieved, signs of effusion on the right side of the chest were presented. On the fourteenth day, he was suddenly attacked with intense pain over the whole of the right side of the chest, and with increased tenderness in the abdomen. Dullness on percussion was made out over the whole of the right lung, except in the second, third, and fourth intercostal spaces near the sternum, where there was a well-marked tympanitic sound. At the same time the patient suffered much from dyspnoea, and presented symptoms of collapse. He was also very feverish. The space between the fifth and sixth ribs on the right side having been punctured, about a pint of thin greenish purulent fluid, with a decided faecal odour, was withdrawn by aspiration. This exudation was mixed with fluid intestinal contents and with bile. On the sixteenth day, a free opening was made in the wall of the chest, and the purulent cavity was washed out with a solution of salicylic acid and drained. The external opening was covered by antiseptic dressings; and, during a period of four days after the second operation, the right side of the chest was washed out twice daily by a solution of permanganate of potash. Subsequently, and when the strength of the patient had improved, carbolic acid was substituted for the permanganate in the injections. The discharge, which, until the middle of August, occasionally had a faecal odour, and presented minute fragments of food, diminished steadily, save with one relapse after premature removal of the drainage-tube on August 14, and, at the end of the fifth month, had altogether ceased. After an interval of six months from the date of the injury, the patient was quite well.

In his comments on this case, Dr. Tillmanns states that, from what he has been able to make out from a study of the literature of pathological communications between the abdominal and thoracic cavities, the formation of a fistula leading into the chest from any part of the intestinal canal is a very rare occurrence. Communications are much more frequently established between the upper portions of the digestive tract—the œsophagus and stomach, and the thoracic cavity. The best known example of such is a cancerous perforation of the œsophagus involving the pleura. Gastro-thoracic fistula is occasionally formed in cases of ulcer of the stomach, and of diaphragmatic hernia. Of much more frequent occurrence are cases of perforation of the diaphragm, by purulent collections formed in the liver or some other solid abdominal viscus.

The symptoms observed in this case soon after the receipt of injury and the occasional presence in the discharge of half-digested food indicated, in the opinion of Dr. Tillmanns, a rupture of the duodenum near its junction with the jejunum, and the attachment of the band of smooth muscular fibres known as Treitz's muscle. It is thought that the patient might probably have had ulceration of the duodenum, an affection which often runs a latent course until a sudden termination in fatal perforation. In consequence of this supposed perforation of the duodenum, suppuration, it is thought, had been established, the faecal abscess having been either shut off from the abdominal cavity by inflammatory adhesions, or having, from its origin, been extraperitoneal. The pus might have passed along the yielding connective tissue or along the posterior abdominal wall, and finally have penetrated through the diaphragm, and set up faecal pyo-pneumothorax in the right pleural cavity. Though regarding this as the most probable explanation of his case, Dr. Tillmanns would not altogether reject the theory of its origin in gangrenous diaphragmatic hernia, and in perforation of a small loop of intestine tightly constricted by the margins of a small orifice in the muscle. It is pointed out, however, that this view is opposed by the facts of the spontaneous closing of the fistula soon after thoracotomy, and of the complete recovery of the patient. In considering the probable course of the faecal abscess from the abdominal to the thoracic cavity, Dr. Tillmanns insists on the clinical importance of the interspaces free from muscular structure, which have been described by Henle as existing between the costal and vertebral origins of the diaphragm. These interspaces, occupied merely by opposed layers of peritoneum and pleura, are of importance with regard to the condition of diaphragmatic hernia, of subphrenic, hepatic, and renal abscesses invading the chest, and of large hyatid and other tumours in the upper part of the abdomen.

Dr. Tillmanns has collected twenty-two cases of fistulous communication between the chest and the intestinal canal. In fourteen of these cases, the fistula led from some part of the large intestine (vermiform appendix, ascending colon, hepatic flexure of colon, transverse colon), and in the remaining eight cases from the small intestine. In three cases, fistulae leading from the duodenum had opened through the posterior wall of the chest, without having perforated the pleura. The most frequent cause of the fistulous communication, according to these collected cases, is perforating ulcer of intestine (fourteen out of the twenty-two cases). In five cases, the fistula was the result either of traumatic suppuration, or of gangrenous diaphragmatic hernia caused through injury. In one case, the communication between the chest and intestinal canal originated in a pulmonary abscess caused by the presence in a lung of a foreign body. In the cases in which the fistula resulted from perforating ulcer of the intestine, the vermiform appendix was the original seat of the disease in six instances, the hepatic flexure of the colon in two, and the duodenum in five. In three cases the fistula communicated with one lung, and in three other cases it passed between the pleura and the thoracic wall. In every case of perforating intestinal ulcer, the fistula was on the right side of the chest; of the eight cases of faecal fistula that had originated in gastric ulcer, in injury, in action of foreign bodies, or diaphragmatic hernia, in five the fistula was on the left, and in three on the right side.

In some remarks on the treatment of thoracic faecal fistulae, Dr. Tillmanns states, that it is proved by his case, that this condition may be cured by thoracotomy and drainage of the cavity in the chest, and that spontaneous closing of the intestinal perforation may follow evacuation of an intrapleural and probably also of a subphrenic faecal abscess. It is suggested, that resection of the perforated portion of intestine might be justifiably resorted to in cases of faecal abscess with persistent intestinal communication. It is well known that good results have

been attained from antiseptic resection of the affected portion of intestine, in cases of false anns and of gangrenous hernia. Equally valid indications for such treatment might be presented in certain cases of thoracic faecal fistula, and of subphrenic faecal abscess. In many cases, also, of perforation of the œsophagus and stomach, cure might possibly be brought about in a similar manner, with or without stitching together of the divided organ, if it were possible to drain effectually the abscess caused by such perforation. Again, in recent cases of perforation at some portion of the gastro-intestinal canal, success might attend very early laparotomy and stitching of the perforated gut or stomach. The result of this treatment in such a condition would depend mainly on the points whether, and if so, to what extent, the contents of the digestive canal had been poured out into the peritoneal sac, and whether the consequent peritonitis were diffused or circumscribed.—*London Med. Rec.*, March 15, 1882.

#### Vomiting of Urine.

MM. GENERALI and TONINI (*Chron. Med. Quir. de la Habana*, Dec. 1881) report the unique case of a syphilitic woman of 33 years of age, who recovered from an attack of double pneumonia, lasting ten days. This was succeeded by an acute peritonitis with serous effusions. Up to this time the urinary secretion had been normal, but it was now suddenly reduced to 500 grammes, and steadily diminished in quantity until there was complete suppression. The patient then commenced to vomit a fluid which resembled urine in all its physical characteristics, and on micro-chemical analysis it was found to contain all the constituents of the urine: urea, phosphates, chlorides, alkaline and earthy sulphates, carbonate and phosphate of magnesia, and large quantities of pigment. The microscope revealed the presence of epithelial cells of the œsophagus and stomach, and mucus and crystals of the uric acid type, which formed spontaneously by the decomposition of the urate of soda in the presence of the acids of the stomach. As long as the vomiting lasted, not a drop of urine was to be found in the bladder. In about a month the patient was completely cured.—*Journ. de Méd. de Paris*, Feb. 4, 1882.

#### An Obscure Case of Duodenal Ulcer.

Dr. E. B. GRAY reports the following case: J. J., aged fifty-eight, a retired college servant, between 5 and 6 P. M. on Sept. 24th suddenly vomited a large quantity of blood. On my arrival about a quarter of an hour afterwards, I found he had brought up by measure over twenty ounces of bright red blood. He was ordered twenty minims of tincture of perchloride of iron every three hours, to keep to ice and iced water, and to remain absolutely at rest on his back.

He was a very well-nourished man, and of healthy appearance. I could find no evidence of disease of heart, liver, or kidneys. The appetite was normal; epigastrium only slightly tender to pressure. The only history was that for two years previously he had had pain "across the pit of the stomach and through to the loins," seldom absent for many days at a time, and for the last month or so getting worse, but never accompanied by vomiting. He was very doubtful whether it had been at all influenced by what he ate. He had never passed blood by the bowel; he had not been losing flesh. No further hemorrhage occurred that day, and at 10 P. M. he seemed very comfortable. Soon after midnight the bowels became uneasy, and in the course of the next four hours he passed by the bowel between a pint and a half and two pints of dark clotted blood.

Sept. 25. Very blanched and prostrate, but no further loss of blood. Slept