CARCINOMA OF STOMACH.

PROBLEMS IN DIFFERENTIAL DIAGNOSIS.

By MAURICE DAVIDSON, M.D., F.R.C.P.

(Physician to the Miller General Hospital for South-East London; Physician to the Brompton Hospital; Consulting Physician to St. Luke's Hospital, Chelsea.)

The following cases are of some clinical interest as problems in differential diagnosis.

Case 1.

The patient was a man aged 43, a shopkeeper, who was admitted to the Miller General Hospital on January 23rd, 1935, with the following history.

Two weeks before admission he had been taken ill with sore throat and pains in the neck and back. Four days later he vomited blood, according to his own doctor's estimate to the amount of about 2 pints. He remained in bed for about 10 days, complaining of increasing stiffness of the neck and pain in the back and abdomen.

Past Medical History. About a year before the present illness he had had a small hæmatemesis and melæna: during the year past he had complained at times of pain and flatulence after meals.

On admission the man's condition was grave. There was marked pallor, and the extremities were cold; he was semi-delirious. The temperature was 101.2°F., the pulse was feeble and rapid (120), and the respirations were shallow. No abnormal physical signs were found in the chest. The abdomen was very slightly distended, but otherwise nothing definitely abnormal could be detected. Owing to the patient's somewhat confused mental condition no satisfactory account could be obtained from him of his symptoms, the only clear fact being the occurrence of the hæmorrhage, of which an unequivocal account was given by his own doctor. After consultation between the physician and surgeon concerned it was decided that no indication appeared at the moment for exploring the abdomen. The whole clinical picture was suggestive of the possibility that the hæmorrhage might be due to some abnormal blood condition, or perhaps associated with a severe general infection.

Examination of the blood showed the following details:—

Red Cells, 2,180,000 per c.mm. (Anisocytosis and poikilocytosis observed).

Hæmoglobin, 32%.

Colour Index, 0.75.

Total White Cells, 21,000 per c.mm. (Polymorphonuclears 85%, Lymphocytes 15%).

The Wassermann reaction was negative. Examination of the cerebro-spinal fluid showed the total protein to be 0.03%; no cells were present.

On the following day the red cell estimation was 2,350,000 per c.mm., hæmoglobin 36%; total whites 15,600 per c.mm. A blood group test was done and the patient found to belong to group IV. Blood urea estimation showed

52 milligrams of urea per cent. A blood platelet count showed 30,480 platelets per c.mm. The fragility of the red corpuscles was found to be normal. A blood culture was found to be sterile after 7 days. On rectal examination a large thrombosed pile was discovered.

In view of the unusually low platelet count the possibility of essential thrombocytopenia was entertained, and this was further suggested by the extended bleeding time, which was found to be 9 minutes, the average normal being taken as 2 to 3 minutes.

Considerable discussion took place as to the nature of this case and as to the question of appropriate treatment. The diagnosis of essential thrombopenia was mainly suggested by the abnormal blood platelet count and by the prolonged bleeding time, the absence of definite splenic enlargement not being regarded as sufficient to exclude the possibility of this condition, and the previous history being insufficiently clear to give a definite indication of ulceration of some portion of the alimentary tract. On the other hand, the absence of even petechial skin hæmorrhages, usual in purpuric conditions, and the presence of continued fever, which is almost always absent even in severe cases of essential thrombocytopenia, as well as the persistence of a typhoid state, suggestive of grave toxæmia, made the conduct of the case extremely difficult. (See Chart I.)

CHART I.
Showing record of the temperature and pulse rate

On February 3rd a considerable rectal hæmorrhage occurred. Examination with the speculum showed bright blood coming from the rectal mucosa, but it was not possible to determine with certainty the exact source or nature of the bleeding.

As the man's condition was becoming more and more serious, it was thought that the only possible chance lay in abdominal exploration, the hope being entertained that the source of the hæmorrhage might be found in some ulcerative lesion higher up in the alimentary tract, this being to some extent suggested by the previous history, though no radiological evidence was available.

Four blood transfusions were given between the 3rd and the 6th of February, and on the latter date an exploratory laparotomy was performed. This disclosed a large mass of carcinomatous growth on the posterior wall of the stomach, adherent to the aorta. The condition was quite inoperable, and the abdomen was closed as quickly as possible. The patient's condition became rapidly worse and he died on February 11th, five days after the operation.

[I am indebted to the kindness of my colleague, Mr. R. C. B. Ledlie, who asked me to see this case with him, for permission to publish these short notes.]

Case 2.

This patient was a man aged 24, who was admitted to the Miller General Hospital on August 27th, 1923, with a diagnosis of gastric ulcer. He had been attending a doctor for the past six months on account of pain in the upper part of the abdomen and frequent attacks of vomiting which usually occurred shortly after a meal. There had been no hæmatemesis and no melæna. The bowels were always constipated.

There was no previous medical history of any significance.

On admission no abnormal physical signs were found in the chest. There was marked tenderness on palpation in the epigastric region, the skin in this area being markedly hyperæsthetic.

X-ray examination after a barium meal showed a doubtful shadow in the region of the greater curvature of the stomach. On subsequent examination a few days later the same shadow was observed and was thought to be indicative of the crater of an ulcer; on palpation of the abdomen the maximum tenderness appeared over this point. The stomach was found to empty with abnormal rapidity. The radiological phenomena were thought to be consistent with the presence of a peptic ulcer on the greater curvature.

The patient was kept in hospital for 5 weeks and was treated with rest, careful dieting, and administration of alkalis. At the end of this period he was very much better, and, being anxious to resume his work, was discharged on September 29th, but was advised to attend periodically in the out-patient department for medicine. He continued in very fair health, and without any marked symptoms, until the end of October when he again began to complain of a good deal of pain. On October 28th he got a severe chill while at work on a very wet day, and when he arrived home in the evening he was seized with very severe abdominal pain which doubled him up and rendered him completely helpless; he vomited several times.

On November 1st he came up to the out-patient department in great pain and looking desperately ill. He was then blanched and had the appearance of having lost a considerable quantity of blood. He was at once admitted to an emergency bed.

On examination he exhibited marked pain and tenderness in the epigastric region and also in the back on the left side. There was a definitely circumscribed area of intense skin hyperæsthesia which corresponded to the stomach area in front, and behind extended from the inferior angle of the left scapula to the twelfth rib. No physical signs were found suggestive of any abnormality in the lung or pleura. The temperature was 99.2°F. and the pulse rate 110.

From the above history, and having regard to the sudden onset of acute pain of such severity, it was thought that in all probability this patient had had a small perforation from a peptic ulcer, and that although this had doubtless been sealed off from the general peritoneal cavity by the formation of peri-gastric adhesions, the development of a sub-phrenic abscess was a likely eventuality. After consultation with one of the surgeons it was decided that the moment was not ripe for surgical intervention and that it would be wiser to wait for a few days, unless some fresh development occurred.

Blood examination showed the following details:—

Red Cells, 2,500,000 per c.mm.

Hæmoglobin, 50%.

Colour Index, 1.0.

White Cells, 18,000 per c.mm.

Differential Count, Polymorphonuclears 69%.
Small lymphocytes 20%.
Large mononuclears 9%.
Eosinophiles 2%.

The Widal reaction was negative to *B. Typhosus*, Para-A, and Para-B, in dilutions of 1/25 to 1/400.

During the succeeding fortnight no abdominal swelling or other localising signs of suppuration developed, nor was there any indication of the appearance of fluid in the pleural cavity. The temperature never rose above 99.2°F., but the pulse-rate averaged 100, and the pain and tenderness with the skin hyperæsthesia persisted, the patient's general condition becoming obviously worse and giving rise to increasing anxiety.

On November 15th, as the man was evidently beginning to go downhill, it was decided that operation must be undertaken, and an exploratory laparotomy was performed by Mr. Cecil Joll. This disclosed a large inoperable carcinoma involving the whole of the fundus and cardia of the stomach. No obstructive symptoms having been present, there appeared to be no indication for a short-circuit. The abdomen was therefore closed. The patient lingered for a fortnight, and died on November 27th. No autopsy was permitted.

Commentary.

The foregoing cases have been here reported, not only for their intrinsic interest and as examples of the problems in differential diagnosis which frequently confront us, but also as an indication of some of the less obvious difficulties in the recognition of the presence of malignant disease.

The "cancer-age" may be taken for the most part to be the period roughly between the ages of 45 and 55. Although cancer seems to have shown in recent years a tendency to an earlier age-incidence than was formerly the case, the occurrence of extensive carcinoma of the stomach in a man of 24, though not perhaps a great rarity, is still sufficiently uncommon to deserve comment and possibly to excuse a failure to diagnose the condition. Of the various disguises which cancer may assume some indeed are commonplaces of medicine. The chronic dyspepsia which is often the only symptom of malignant disease of the stomach in a middle-aged patient and the irritative colitis which is but the expression of carcinoma of the lower bowel are, or should be, well known in general medical practice. In other cases of alimentary cancer the picture is more confusing:—e.g., one instance was brought to our notice of a young woman in the early twenties who was operated on for what had every appearance of a perfectly typical attack of acute appendicitis in a subject previously in good health: exploration of the abdominal cavity disclosed an inoperable carcinoma of the cæcum.

That a primary bronchial carcinoma may underlie what seems to be an unequivocal pulmonary abscess is a fact which, though familiar in the mind of the lung specialist, is probably not sufficiently appreciated in general medical practice. The class of case in which the presence of malignant disease within the body is ushered in by the exhibition of vague symptoms and signs which simulate those of various general diseases, infections, &c., is, perhaps, the most difficult of all from a diagnostic standpoint. Case No. 2, although the patient did give some history of previous trouble suggestive of the possibility of a lesion of some portion of the alimentary tract, may conceivably be included in this category.

Of the numerous phases of general constitutional disturbance, fever, joint-pains, alterations in the blood-picture (e.g., Case 1), and so forth, which may form the initial manifestations of unsuspected cancer it is hardly possible to treat in so short a space. We would, however, venture to suggest the perusal of these two cases as an exercise in the study of the masked variety of malignant disease and an indication that it should ever be thought of in the presence of an anomalous syndrome.

— : o : —