wall. This dilatation was lined with papillomatous tissue. Behind it the pancreatic gland was a picture of atrophy and fibrous replacement. There were marked fibrosis, collections of cellular infiltration, and a few acini here and there. The islets of Langerhans were prominent in the fibrous tissue. The obstructive element was suggested by the marked dilatation of the duct system. Section of a part of the papilloma showed the branching villi lined with regular columnar epithelium on an unbroken basement membrane. The pathologist thought that at this stage it was probably benign but might well develop malignant tendencies.

Progress Report.—This case has been followed up at regular intervals from March, 1951, to the time of writing, and in the main has presented a satisfactory clinical picture. The patient's body weight, which in health was 12 st. 9 lb. (80.3 kg.), has remained steady at 11 st. 8 lb. (73.5 kg.), and his general feeling of well-being has slowly increased since pancreatectomy. At first he was subject to violent attacks of diarrhoea and abdominal colic with the least dietary indiscretion, but when he remained on a strict fat-poor diet with the addition of one tablet of pancreatin before each meal, these were infrequent. He usually had two or three semi-formed stools a day, but any intake of excess fat immediately put the number up. He began light work in July, 1951, four months after operation, and after a month resumed a full day's work as a clerk in a publishers' office.

Summary of Case Reported by F. M. Owens.—A man aged 59 was operated on for suspected carcinoma of the pancreas. The pancreas was hard, except for two large cystic areas. A total resection revealed a severe chronic pancreatitis with an intraductal papilloma obstructing the main pancreatic duct near the ampulla of Vater. He died four months later from a perforated anastomotic ulcer.

Conclusion

The case reported above might well have been classified as "chronic pancreatitis" if excision had not been undertaken, and even the histology supported the diagnosis until the obstructive papilloma in the duct system was found. As the aetiology of "chronic pancreatitis" remains obscure, it is suggested that some cases may well be due to a ductal obstruction of this nature. A complete exclusion of the residual pancreas from the digestive tract is not incompatible with continued well-being, but it is obvious that, at least, in this case great care must be taken over the ingestion of fat. Pancreatin capsules are not adequate substitutes for the natural glandular secretion.

Summary

A case of obstructive pancreatitis due to papilloma of the duct of Wirsung is presented.

Its pathology, treatment, and post-operative course and follow-up are detailed.

The altered physiology is discussed.

I wish to thank Dr. P. O. Ellison, Royal Northern Hospital, for an opinion on the pathology.

REFERENCES

- Boyd, W. (1947). *Surgical Pathology*. Saunders, Philadelphia.
 Brunschwig, A. (1942). *The Surgery of Pancreatic Tumours*. Kimpton, London.
 Owens, F. M., Jun. (1948). *Ann. Surg.*, 128, 15. Case 1.
 Willis, R. A. (1948). *Pathology of Tumours*. Butterworth, London.

The U.S.A. is at present suffering an exceptionally severe epidemic of acute poliomyelitis, according to reports in the weekly bulletin of W.H.O. In the week ending September 13, 4,032 cases were notified, which is the highest figure ever recorded for a single week. From January 1 to September 6, 27,362 cases were notified. This total is 3.5% more than for the corresponding period in 1949, in which year the epidemic was the greatest ever recorded. The total to September 6 this year is 77% and 80% more, respectively, than the totals for the corresponding periods in 1950 and 1951.

BANTI'S DISEASE IN TWO BROTHERS WITH A BLOOD-GROUP ANALYSIS OF THE PARENTS

BY

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As is well known, Banti's syndrome comprises splenomegaly with fibrotic degeneration, in some cases associated with cirrhosis of the liver. The most important clinical manifestations are anaemia, haematemesis, and ascites. In general the disease is not regarded as hereditary, although a familial occurrence has been reported in a few instances (Gunn, 1926; Gutzeit and Wendt, 1930). Some diagnostic difficulty is often encountered, as a histological examination of the spleen is usually necessary to distinguish the syndrome from other forms of splenomegaly.

Recently we had occasion to observe Banti's disease in two brothers. Both died, and the diagnosis was confirmed by necropsy. The parents and the nine sibs showed no sign of the disease. There was no history of hepatitis in either case. The patients were not alcoholics, and the Wassermann reaction was negative in both.

Case Reports

Case 1.—Male, born 1924. At the age of 23 the patient developed anorexia and periodical epigastric pain. Admitted to the Copenhagen City Hospital. Diagnosis: splenomegaly, haematemesis, ascites. Splenectomy was performed, but the patient died after the operation from phlegmonous cholecystitis with perforation and cholangitis. At necropsy the spleen measured 25 by 17 by 8 cm., and was of a firm and hard consistency. Histological examination showed it to be slightly fibrotic. The liver measured 28 by 16 by 6 cm.; its surface was granular and the consistency firm. Histological examination revealed cirrhosis of the liver. In addition, pronounced oesophageal varices and a large thrombus in the portal vein were found.

Case 2.—Male, born 1925. At the age of 16 years splenomegaly was diagnosed. At age 23 the patient was admitted to the Copenhagen City Hospital because of haematemesis and melaena. At the age of 24 he underwent splenectomy with spleno-renal anastomosis. The spleen measured 10 by 15 by 20 cm. and was very firm. Histological examination showed it to be fibrotic. At the age of 26 he had severe haematemesis and melaena: death ensued. Necropsy: liver enlarged, tissue very firm, pronounced hepatic cirrhosis, moderate oesophageal varices, remains of widespread thrombosis in the portal vein.

Discussion

Ever since Banti first described the disease at the end of the past century its aetiology has been the subject of discussion. Several authors have emphasized the portal hypertension as the primary pathogenetic factor, whereas others believe morbid conditions in the splenic arteries to be the actual cause. This question has not yet been finally elucidated.

Quite recently Tidy (1952) advanced the theory that Banti's disease could be caused by rhesus incompatibility between mother and child. Gerrard (1952), however, examining the question, concluded that splenic enlargement could only be a rare sequel of rhesus iso-immunization.

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We felt that it would be interesting to submit these two cases of proved Banti's disease to a thorough serological analysis.

The parents' blood groups were as follows. Father: A₁, MN, P+, C+, D+, E+, e+, Le (a+), Fy (a-), Kell-. Mother: A₁, N, P+, C+, c-, D+, E-, Le (a-), Fy (a-), Kell-. The mother has never received a blood transfusion, and on the basis of the parents' blood groups it can be ruled out that the mother could have formed anti-D during pregnancy. In order to decide whether the mother might have formed other antibodies which possibly might have caused the disease in the two children, her serum was tested against the father's red cells at 5° C., at room temperature, and at 37° C., and a search was made for the possible presence of an incomplete antibody.

The results of all these tests were negative. We could not find in the mother's blood antibodies of any kind which were able to agglutinate the father's red cells. In order, furthermore, to make sure that a possible previously existing antibody might not have been reduced to so low a titre as to be undemonstrable, we utilized the fact that both parents were Group A₁, Rh+. The mother was injected intravenously with 5 ml. of the father's blood. By this procedure a possible dormant antibody would have been restimulated (Race and Sanger, 1950). At the end of a fortnight the mother's serum was again tested against the father's red cells without any complete or incomplete antibodies being demonstrable in the mother's serum. It is thus highly improbable that the present proved cases of Banti's disease could have been due to an incompatibility of the blood groups of mother and child, either within the rhesus system or any of the other known, or so far unknown, systems: the father's red cells must carry the antigens to which the mother might have formed the antibodies causing the disease in the children.

Thus Tidy's theory that blood-group incompatibility between mother and child is an aetiological factor in Banti's disease could not be confirmed in the present cases.

We should like to thank Dr. H. Heckscher, Dr. Poul Iversen, and Dr. Svend Petri, of the Copenhagen City Hospital, for kind permission to make use of case records of their patients; and also Professor Tage Kemp, University Institute of Human Genetics, Copenhagen, for help and advice.

REFERENCES

- Gerrard, J. (1952). *British Medical Journal*, 1, 1385.
Gunn, F. D. (1926). *Arch. Path.*, 1, 527.
Gutzeit, K., and Wendt, H. (1930). *Dtsch. Arch. klin. Med.*, 168, 312.
Race, R. R., and Sanger, R. (1950). *Blood Groups in Man*, p. 156. Oxford.
Tidy, H. (1952). *British Medical Journal*, 2, 1.

Three of the medical films selected for the Royal Photographic Society's 1952 annual exhibition have recently been shown privately. The films were "The Fothergill Operation," "Care of the Colostomy," and "Bacteriological Techniques—Inoculating a Plate." "The Fothergill Operation" (32 minutes, silent, colour), from the Manchester Royal Infirmary, is a straightforward film of an operation, which has been beautifully photographed. In contrast with many other similar films, it really does enable the steps of the operation to be seen and appreciated. Clarity has been aided by the use of simple diagrams, the only criticism being that there are not more of them. "Care of the Colostomy" (20 minutes, silent, colour) is a much less satisfactory film. The first part, which describes the dressing technique for nurses, does so in twice the time that would be taken by a competent sister tutor. The second part contains similar material but directed at the patient, and in this context it is rather more successful. However, it is difficult to visualize the intended audience. Is this part of the film to be shown to each patient as he leaves for home? "Bacteriological Techniques—Inoculating a Plate" (eight minutes, silent, colour), from St. Mary's Hospital Medical School, aims simply at teaching technique. It is intended to replace the half-dozen demonstrations that would be necessary to show the detail of the technique to a class of 50 students.

Medical Memoranda

Friedländer Pneumonia with Massive Necrosis of Lung

Pneumonia due to *Bact. friedländeri* accounted for 0.6% of 5,000 cases of pneumonia studied by Solomon (1937). Hyde and Hyde (1943) give a figure of 1.6%, and in a series of 51 cases report two which recovered following surgical drainage of a lung abscess. Taylor (1944) describes one case. Humphreys (1945) two cases, and Brock (1946) one case in which pneumonia due to *Bact. friedländeri* resulted in sequestration of lung which was successfully treated by surgical drainage. In view of the rarity of the condition and the dramatic findings at operation the following case is worth recording.

CASE REPORT

A man aged 40 was admitted to hospital on September 14, 1949, under the care of Dr. S. Locket, with a two-day history of cough, malaise, and breathlessness. There had been no haemoptysis, pain, or rigors, and he gave no previous history of chest disease.

On examination he was seen to be well covered, but very ill, toxic, dyspnoeic, and slightly cyanosed. His temperature was 102° F. (38.9° C.), pulse 120, and respirations 30. Clinical examination of the chest gave signs of consolidation in the left upper lobe, and a diagnosis of lobar pneumonia was made. There was no herpes, and no abnormality was found in any other system. The sputum was tenacious, small in amount, and not blood-stained. On culture a mixed bacterial flora was obtained. The white-cell count was 12,000 (polymorphs 80%). Radiography (September 17) confirmed the presence of consolidation in the left upper lobe and showed an opacity in the basal portion of the right upper lobe.

Sulphatriad and penicillin in massive doses (1,000,000 units four-hourly) did not have any appreciable effect. Radiography (September 22) showed resolution in the right upper lobe and cavitation in the left. The white-cell count had risen to 24,300 and clubbing of the fingers was developing.

Aureomycin (1 g. followed by 250 mg. four-hourly for 24 hours, and then 250 mg. six-hourly) was given from September 29 to October 12, with a slight improvement in the patient's general condition. His temperature, however, remained between 100 and 103° F. (37.8 and 39.4° C.). Radiography (October 6) showed a large cavity in the left upper lobe—8 cm. in the postero-anterior film—and 12 cm. in the lateral view.

The above therapy was discontinued on October 12 and streptomycin (0.5 g. four-hourly) begun. This produced definite improvement, and his temperature gradually returned to normal over the ensuing week. Pyrexia recurred, however, at the beginning of November, and aspiration produced a small quantity of blood-stained pus, culture of which gave a pure growth of *Bact. friedländeri* insensitive to 16 units of streptomycin per ml.

An operation was performed by Mr. W. D. Park on November 4. When the pleural cavity was opened air escaped, followed by thick odourless pus. The patient became very distressed, started a spasm of continuous coughing, and expelled from the wound, aided by a sucker nozzle, an irregular piece of necrotic lung tissue, approximately 3½ by 2½ by 1½ in. (8.9 by 6.3 by 3.8 cm.). Culture of the pus again gave a pure growth of *Bact. friedländeri*.

After this the temperature became normal within a few days, but a bronchopleural fistula developed. The residual cavity failed to close, and Mr. Vernon Thompson performed a two-stage thoracoplasty. This was successful, and the