ON THE DESIRABILITY OF OPERATING FOR, AND THE MORTALITY FROM CHRONIC PANCREATITIS.

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DURING the last few years our knowledge of the physiology and pathology of the pancreas has increased considerably, and we have learnt much about chronic pancreatitis. Long-standing venous congestion leads to enlargement and induration of organs, such as we constantly see in a nutmeg liver or the large tough kidney associated with cardiac disease. If the term chronic pancreatitis may be applied to a like change in the pancreas this is probably the commonest form of chronic pancreatitis, although it is often overlooked by writers on pancreatic diseases. I find that at Guy's Hospital out of 6,708 consecutive necropsies, the pancreas has been described by the morbid anatomist as cirrhotic, congested, or hard in 26 instances; in one case it is described as like cartilage, and in those in which a microscopical examination was made an increase of fibrous tissue was found. These cases have been fully described elsewhere,¹ so it will suffice if I say that this condition of pancreas was often associated with other evidence (for example, nutmeg liver) of severe backward pressure, and in 23 out of 26 cases there was such disease as would have caused severe backward pressure. In 2 of the cases the patient suffered from cirrhosis of the liver, and although then it is tempting to assume that the chronic pancreatitis was directly the result of venous congestion due to the cirrhosis, yet we must remember that some authors are decidedly of opinion that alcoholic drinks can produce chronic interstitial pancreatitis quite apart from cirrhosis of the liver. Kippel and Lefas,² and Opie³ quote cases in point.

Obstruction to the exit of the pancreatic secretion will produce chronic pancreatitis. Such obstruction may be due to pressure of growth or to a pancreatic calculus or a biliary calculus, and it is well known, as Riedel, Mayo Robson, and other operators have shown, such pancreatitis may lead to sufficient induration of the gland for the operator to suppose he is dealing with malignant disease of the pancreas. Chronic pancreatitis has also been associated with and ascribed to endarteritis. It has also been found in cases of tubercle, but here there is the possibility that it ought to be ascribed to backward pressure from pulmonary disease; syphilis is probably in very rare cases a cause of pancreatitis. There are also the cases ascribed to spreading of inflammatory processes up the duct, and direct infection from the duodenum, and those due to the typhoid bacillus.⁴ Lastly, perhaps some would include the atrophied pancreas so frequently met with in diabetics under the heading of chronic pancreatitis.

But regarded from the clinical point of view, most of these varieties of chronic pancreatitis are so overshadowed by symptoms other than those which can be set down to the pancreatitis, that with our present knowledge they do not present themselves as cases of pancreatitis. For example, in the pancreatitis due to backward pressure, the disease of the pancreas cannot be diagnosed; we can only surmise that as the other symptoms of backward pressure are well marked, probably the pancreas will be found to be indurated. So in the induration due to the pressure of a growth, and if there is an alcoholic pancreatitis apart from cirrhosis of the liver we have no means of ascertaining this. The pancreatitis due to syphilis is very uncommon, cannot be diagnosed, and is usually found in infants that have died shortly after birth. Pancreatic calculi are excessively rare; their existence has only been diagnosed successfully once or twice, and even if the diagnosis were made we could not diagnose also the presence of pancreatitis, unless glycosuria were present, nor are we in a better position with regard to that due to vascular disease, even if such exists. The chronic inflammation of the pancreas associated with the presence of a gall stone in the opening of the bile duct cannot be found out until it is revealed at the operation undertaken for the removal of the gall stone. It is more easy to correctly suggest pancreatitis when there is sugar in the urine, but in all these cases including those of diabetes no treatment specially directed to the pancreatitis is possible.

Nevertheless, the clinical interest of chronic pancreatitis is by no means so slight as might appear from what has just been said, for thanks to Mr. Mayo Robson and other surgeons

we have learnt that there is a form of chronic pancreatitis associated with jaundice, which may, perhaps, sometimes owe its existence to previous gall stones, yet, in fault of a better suggestion, may be otherwise due to spread of inflammation from the duodenum directly to the pancreas. Or, again, the symptoms may be in some part due to local peritonitis over the head of the pancreas, for operators have frequently found adhesions over it. The symptoms of this disease are given fully by Mayo Robson and Moynihan.⁵ Briefly, they are deep jaundice, pain, tenderness, vomiting, and wasting. These authors say: "Chronic pancreatitis must be treated by abdominal section and drainage..... obtained by draining the gall bladder." These cases are usually thought to be examples of carcinoma obstructing the bile duct, and the brilliant success of some surgeons has emboldened others to operate in cases in which operation was probably hardly necessary—for example, I have read of patients with disease of the heart and jaundice who have been operated on, and inasmuch as serious harm may follow operation by unskilled operators, it is desirable to record a case which teaches that probably an operation and certainly draining the gall bladder are not always necessary, and, secondly, to show that chronic pancreatitis is rarely fatal. Mr. Edmund Owen operated upon my patient, and he briefly recorded⁶ the case a year after operation, but as I have kept in touch with the patient and know that now, two years after operation, he is still well, the case seems worthy of being reported in full; it is as follows:

A man, aged 62, seen July 2nd, 1901, at Hampstead with Dr. James Andrews and Dr. Collingwood Andrews. The patient is deeply jaundiced, he looks very ill, and he is not strong enough to sit up. He tells us that a year ago he began to suffer from abdominal pain, and he has had it on and off ever since. It occurs in paroxysms at intervals of seven or ten days. Lately it has been very severe. For the last six months he has had jaundice the depth of which has varied from time to time. He is hardly ever sick; there have been no rigors and no rises of temperature. During his illness he has lost 2 st. in weight. A careful examination (including the rectum) of the whole of his body revealed nothing abnormal, but some tenderness over the head of the pancreas. We expressed the opinion that the patient was suffering from carcinoma of the head of the pancreas. The patient and his friends asked whether any operation could be performed which would relieve him; we urged strongly against operation, but the patient and his friends were determined that an exploratory operation should be performed to see if so serious a diagnosis was correct, accordingly we reluctantly gave consent, and Mr. Edmund Owen was asked to perform it. A week later he opened the abdomen, and found the head of the pancreas so large and hard that, as this was considered to indicate that the patient was suffering from carcinoma of the head of the organ, the abdomen was closed. The bile passages were not drained in any part. Four or five days after the operation the patient began to improve in general health, his pain began to leave him, and his jaundice to disappear. From this time he put on flesh. I saw him next on August 16th, 1901. He then looked quite well, he was not jaundiced, had gained much flesh; but I thought I could feel a distinct lump in the region of the head of the pancreas. I saw him next on September 6th, 1902. He then weighed 12 st. 1 lb.; he looked in excellent health, he was back at his work. Nothing abnormal could be felt in the abdomen. The urine contained neither albumen, bile, sugar, nor diacetic acid. I heard from him June 11th, 1903, and he reported, "I am as well as usual, and have been so since I came to see you about a year ago. I shall be 65 years of age in September."

This case teaches that it is not always essential for cure that the bile should be diverted from its normal track, and suggests that in some cases this has been done unnecessarily. We all know of cases in which after laparotomy for divers conditions benefit has followed although no operation has been performed upon the diseased organ. Such cases are always difficult to understand, and are always open to the interpretation—hard indeed sometimes to believe—that the patient would have got well if no operation had been performed. We have all probably met with rare cases of jaundice which certainly did not appear to be gall stones, and which were regarded as malignant disease, but after months the jaundice has disappeared, although no operation has been performed, and the patient has got well. It is of no use to record such cases as instances of chronic pancreatitis that have recovered, for some of them may have been examples of an impacted gall stone that has ulcerated its way into the intestine; but, on the other hand, some may have been instances of chronic pancreatitis (like my patient in whom no stone could be felt) that have got well apart from treatment.

The second point to be considered is whether chronic pancreatitis is often fatal. If fatal it is (unless successfully diagnosed) sure to be mistaken for malignant disease of the head of the pancreas. I have examined the *post-mortem* records of Guy's Hospital from 1861 to 1901, both inclusive (a period of forty-one years) during which time about 19,000

necropsies have been made, and I have examined the records of all the cases of malignant disease of the pancreas. In the following table I have included all the cases in which malignant disease was primary in the pancreas, and I have classified them into those in which secondary growths were present and those in which secondary growths were not present.

Table showing Number of Cases described as Primary Carcinoma of the Pancreas in the Post-mortem Theatre of Guy's Hospital from 1861 to 1901, both Inclusive, and Classified into those with and those without Secondary Deposits.

Year.	Number of Cases of Malignant Disease of Pancreas with Secondary Deposits.	Number of Cases of Malignant Disease of Pancreas without Secondary Deposits.	Year.	Number of Cases of Malignant Disease of Pancreas with Secondary Deposits.	Number of Cases of Malignant Disease of Pancreas without Secondary Deposits.
1901	3	2	1880	3	1
1900	4	0	1879	2	1
1899	3	1	1878	3	1
1898	1	0	1877	0	0
1897	1	0	1876	1	0
1896	8	0	1875	0	0
1895	3	0	1874	2	0
1894	2	0	1873	1	0
1893	2	0	1872	0	0
1892	3	1	1871	1	1
1891	1	0	1870	0	0
1890	1	0	1869	0	0
1889	2	0	1868	0	0
1888	1	0	1867	0	0
1887	2	1	1866	0	0
1886	2	1	1865	0	0
1885	0	0	1864	0	0
1884	1	0	1863	0	0
1883	0	0	1862	0	0
1882	0	0	1861	0	0
1881	4	0			

It is quite clear that the cases in which secondary deposits were present cannot be regarded as examples of chronic pancreatitis, but I have examined both the clinical and *post-mortem* reports of each case which is entered in the *post-mortem* records as malignant disease of the pancreas, but in which no secondary deposits were present. The first occurred in 1871. The account of the *post-mortem* says: "The duodenum was found to be puckered and contracted, its calibre just admitting the little finger. There was a growth situated posteriorly, and connected with the head of the pancreas." There was no histological examination, but from the description we probably have here an example of new growth. The case which occurred in 1878 showed an ulcerated fungating growth. Dr. Goodhart made a histological examination of the pancreas of the case which occurred in 1879, and pronounced it to be carcinoma. With regard to the case which presented itself in 1880 the head of the pancreas contained a hard scirrhus-like mass with a quantity of colloid material in it, so this can hardly have been an instance of chronic pancreatitis, a histological examination was made in this case. The necropsy made in 1886 showed that the head of the pancreas was surrounded, and involved in a soft fleshy-pink growth..... The common bile duct could not be traced into the duodenum; it appeared to end in the growth. This does not suggest pancreatitis. The description of the *post-mortem* of the case that died in 1887 reads more like pancreatitis than the others, for a large cubical mass of what appeared to be growth was found in the head of the pancreas, but the patient was never jaundiced, and it is doubtful if chronic pancreatitis could kill apart from jaundice. It is true that Opie⁷ has recorded four cases of chronic interlobular pancreatitis associated with persistent vomiting, and the patient under consideration had persistent vomiting, but in Opie's cases something else serious enough to cause death was present, for the first died after an operation for premature labour and had pulmonary haemorrhage, the second had carcinoma of the uterus, the third had mitral disease, and the fourth malignant disease. But at the necropsy on the woman who died at Guy's Hospital in 1887 nothing to explain death was found beyond the tumour of the pancreas, which had caused contraction of the duodenum. The case, however, that died in 1892 does read very much as though it was a case of chronic pancreatitis. Therefore I publish it in full by the kind permission of Dr. Frederick Taylor.

A. A. W., male, aged 42, a travelling accountant, was sent to the hospital by Dr. Bisshopp, of Tunbridge Wells, on account of jaundice. He was admitted under Dr. Frederick Taylor, April 21st, 1892. There was no

evidence of alcoholism or syphilis. He first noticed jaundice with itching in November, 1891; soon his motions became quite white. He has not wasted.

On Admission.—He was deeply jaundiced, suffering much from itching. His liver was uniformly enlarged, extending to 3 in. below the ribs. There was no pain. The urine was loaded with bile, but otherwise healthy. The motions were very white, and he had some diarrhoea.

May 2nd. He first complained of pain over the liver, which had remained the same size as since admission. May 12th. He had lost 7 lb. since admission. May 16th. Much diarrhoea, motions dark, liver thought to be smaller. May 23rd. Motions white again. May 31st. Vomiting had set in; stomach appeared dilated. Had lost 6 lb. more. The sickness continued; he had much abdominal pain, and gradually became weaker, and soon died. At the necropsy the body was deeply jaundiced. The head of the pancreas was hard and much enlarged, and the pancreatic ducts and bile ducts were much dilated. The gall bladder was normal. There were no gall stones or secondary deposits anywhere. Histologically the pancreas showed increase of embryonic connective tissue. An adjacent lymphatic gland was also examined histologically and found healthy.

The case which died in 1899 was examined histologically and found to be a columnar-celled scirrhus carcinoma and the two remaining cases, which occurred in 1901, were certainly not chronic pancreatitis for one was an example of suppuration in connexion with a growth and the other was proved histologically to be a carcinoma. If from these 10 cases described in the report of the necropsy as examples of carcinoma of the pancreas without secondary deposits we deduct those histologically examined (four in number), and the case in which there was a fungating ulcerating growth and the one in which there was suppuration in connexion with a growth and which cannot therefore have been an example of the kind of pancreatitis we are considering, we have six in all to deduct, leaving only 4 cases out of 19,000 necropsies which could by any possibility be chronic pancreatitis. One almost certainly was, but in each of the other three there was some evidence that they were not, so that it was very unlikely that they were all examples of chronic pancreatitis. Hence we see that chronic pancreatitis is excessively rarely a fatal disease, probably not being responsible for more than one or two out of nineteen thousand deaths and certainly not being responsible for more than four. Thus from this point of view also the question of the necessity, except very rarely, of operation is raised. Further experience alone can give us the correct answer. It will be noticed that no cases of carcinoma of the pancreas occurred in the decade from 1860-1870 that cannot be due to any error of observation for during that period the necropsies were being made by Sir Samuel Wilks and Dr. Moxon.

REFERENCES.

- ¹ Diseases of the Pancreas, *Guy's Hospital Reports*, vol. liv., p. 28. ² *Revue de Médecine*, 10 Janvier, 1903, p. 23. ³ Opie, *American Journal of Medical Sciences*, May, 1902, p. 845. ⁴ Moynihan, *Lancet*, June 6th, 1903, p. 1586. ⁵ *Diseases of the Pancreas and their Surgical Treatment*, 1903. ⁶ *BRITISH MEDICAL JOURNAL*, October 25th, 1902. ⁷ *Loc. cit.*

THE PROBLEMS OF CANCER.

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I.—*The Extent of the Field which has been Investigated in Regard to Cancer and its Relation to the Pessimistic Views Entertained in Regard to the Ultimate Results of the Investigation of Cancer.*

Our knowledge of malignant new growths is all but limited to a recognition of the facts which present themselves for investigation in pathological laboratories, obtaining their material from the *post-mortem* or operating theatres of hospitals in the most civilized portions of the world. The material thus obtained has been extensively investigated, from the purely histological standpoint, to a great extent also in co-relation with clinical observations. It is, perhaps, generally conceded that further advances in these directions will not be easy of attainment, and that by these paths alone the problems of cancer will not be solved.

With the materials occurring in hospitals other lines of inquiry, especially biological, bio-chemical, the conditions of growth of cancerous tissue as distinct from the problem of the genesis of malignant new growths, have been hardly touched upon, except in a purely speculative fashion, and in the latter direction to a degree out of all proportion to the meagreness of the facts accumulated.

Speculation in regard to the nature and genesis of malignant new growths has roamed over the full field of biological