

pancreas, 3; tubercle of pancreas, 2; dilation of ducts not due to growth, 2; floor of duodenal ulcer formed by pancreas, 1; abscess of pancreas, 1; œdema of pancreas, 1; and ruptured pancreas, 1. We have had one case of hæmorrhagic pancreatitis since this list was drawn up.

The cirrhotic, congested, or hard pancreas was nearly always associated with increased venous pressure due to cardiac, pulmonary, or hepatic disease, and was as far as is known of no clinical interest. In thirteen out of the sixteen cases in which the pancreas was small diabetes was present, and beyond the symptoms of this disease there was during life no evidence that the pancreas was diseased. When this organ was the seat of secondary deposits or hard growths of other organs adherent to it the symptoms of the primary disease quite overshadowed those due to the affection of the pancreas. The fatty pancreas was generally associated with old age, and although pancreatic calculi, pancreatic cysts, and hæmorrhagic pancreatitis are extremely interesting, yet we cannot stop to consider them to-day, and the above list shows that they are so rare in comparison with primary malignant disease that that is the disease of the pancreas most interesting from a clinical point of view. The growth is almost always a scirrhus carcinoma. The medullary variety is rare and sarcoma is excessively rare. The proportion of males to females is two to one, and most patients are somewhere between forty and sixty years old. You will notice our two patients illustrate all these points.

It is extremely important for you to bear in mind that the growth is nearly always in the head of the gland, and as a result of this the common bile-duct is pressed upon, the bile-ducts dilate, the liver becomes enlarged, the gall-bladder is, in at least a third of the cases, distended, and it may be felt as a tumour projecting from underneath the liver, the patient may be jaundiced, his stools clay-coloured, and he may show signs of cholæmia. Sometimes, when the original growth itself fails to produce these symptoms, they are present and owe their origin to enlargement of the portal glands from secondary deposits. Another but less frequent mechanical effect of the presence of the growth in the head of the gland is that the pancreatic duct is pressed upon and that part of it which is behind the point of pressure dilates. Bright¹ more than sixty years ago pointed out that the motions may in carcinoma of the pancreas contain large quantities of fat; it may be so much that it forms a thick scum, particularly about the edges of the vessel containing the fæces. As blocking of the common bile-duct is very common, and this symptom is so rare, it is probable, as I believe Professor Gairdner teaches, that it is most likely due to the fact that the pancreatic secretion is prevented from reaching the duodenum, and failure to digest fat may perhaps explain what I have noticed—namely, that patients suffering from malignant disease of the pancreas may waste extremely rapidly.

To return to our two cases, remember that they were quite exceptional in the position in the pancreas of the growth and in the absence of secondary infiltration of the portal glands, and that these anatomical peculiarities will explain the absence of the symptoms we have been discussing. Less important symptoms of carcinoma of the pancreas are that the patient usually suffers from constipation due no doubt in many cases to the absence of bile in the intestine. His feet may swell either from pressure of the growth on the vena cava or because he is, like other sufferers from carcinoma, very anæmic. Sometimes it is possible to feel the growth as a hard, tender mass with a transmitted pulsation from the aorta and stomach resonance in front of it, but you should remember that in thin subjects it is occasionally possible to feel the pancreas even when it is not the seat of growth. I have felt it as a hard mass when it has been cirrhotic from backward pressure due to bronchitis. In very rare instances a carcinoma of the pancreas forms a tumour large enough to be seen. The patients do not usually live sufficiently long for the growths secondary to that in the pancreas to produce marked symptoms unless they are in the portal glands. They may occur in any organ, but a usual site is the liver.

Our second case is very uncommon because it is rare for the pancreatic growth not to be in the head of the organ and still more unusual for it to ulcerate into the stomach and kill by hæmatemesis, but we have had other cases at Guy's Hospital in which it has attached itself to neighbouring

organs; for instance, it has adhered to the stomach, and in one case under my own care it implicated the secondary part of the duodenum, constricting it and perhaps helping to explain the very severe vomiting and constipation from which the patient suffered. You will find that Bright described a case in which a pancreatic growth ulcerated into the duodenum. Not long ago a patient was admitted for intestinal obstruction due to the adhesion of a pancreatic growth to the colon and I have specimens showing how it may involve the semilunar ganglia, but I do not know that this causes any symptoms.

Neither of our two cases showed any fat necrosis, but you should always look out for it in any form of disease of the pancreas, and we have had an instance at Guy's Hospital of its occurrence in association with pancreatic carcinoma.

The only treatment possible is palliative. Morphia is usually required for the pain, vomiting is often especially difficult to deal with, and you must give the patient all the food he can take.

CASE OF ACUTE PERFORATIVE APPENDICITIS, FOLLOWED BY SEPTIC PERITONITIS; ABDOMINAL SECTION; RECOVERY.¹

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CASES of recovery after abdominal section performed for acute septic peritonitis, depending upon disease of the vermiform appendix, are sufficiently rare to warrant the publication of any that may occur. In the early part of last year I was fortunate enough to have such a case. The following are the notes. The patient, aged thirteen years, an exceptionally bright and intelligent boy, suffered two years ago from some illness of one week's duration, characterised by abdominal pain, constipation, and a general feeling of languor and sickness, without actual vomiting. From this date until March 29th he was perfectly well in every respect; in fact, he was an unusually active and healthy lad. On this latter date, March 29th, 1895, he had in the early morning a loose motion with some abdominal discomfort, hardly amounting to pain. From that time he had no action of the bowels, though flatus passed occasionally. Abdominal pain, slight and of only momentary duration on the 29th became on the 30th and 31st a gradually-increasing trouble to him, and on April 1st was very severe and of the nature of intermittent colic, superimposed on a continuing incessant pain. The abdomen gradually distended until the night of March 31st–April 1st, and then meteoric distension of the abdomen developed rapidly in the course of a very few hours. From this time all his symptoms became more pronounced and intensified and the prostration rapidly became progressive. He vomited once only, on March 31st. On April 1st I saw the patient in consultation with Dr. Gott; his condition was then as follows. The patient was lying on his back with the knees doubled up. His face was rather flushed, but pinched and drawn and expressive of constant anxiety and pain. The surface of the body and extremities was of a faint bluish tinge, was rather cold, and had a characteristic clammy feeling. The pulse was rapid and feeble and the temperature was 100.6° F. The tongue was coated. Respiration was quick and very shallow; there was no hiccup. The abdomen was uniformly distended and everywhere tender, though perhaps a little more so in the cæcal region than elsewhere; this side alone was mentioned as having been tender on the previous day, and there Dr. Gott felt a "sausage-like lump," which rendered the region more prominent than the rest of the abdomen. There was no localised resistance in any part of the abdomen. I had in my own mind no doubt that there was fluid in the general peritoneal cavity, and the provisional diagnosis that Dr. Gott and myself arrived at was that there was an acute general peritonitis, dependant probably upon rupture of an abscess cavity formed originally in connexion with the vermiform appendix, and we fixed the time of the rupture as immediately before the onset of the rapid distension. Acting upon this diagnosis I

¹ Transactions of the Royal Medical and Chirurgical Society, vol. xiii., 1833.

¹ A paper read before the Leeds and West Riding Medical-Chirurgical Society, May, 1893.

proposed to operate by opening first the general peritoneal cavity through the linea alba, cleansing that thoroughly, and then opening up the caecal region by a separate incision and dealing with whatever I found there. Ether was then administered and I made my first incision through the middle line about midway between the umbilicus and the pubes. On opening the peritoneal cavity a large quantity of curdy-looking, highly offensive pus made its escape. On introducing my finger into the abdomen I was able to make out that there was a moderate-sized collection of pus in Douglas's pouch, and I could feel an opening distinct, though small, which led to an abscess cavity in the neighbourhood of the appendix in the iliac fossa. I then thoroughly cleansed the whole peritoneal cavity, spending time over it and taking pains to ensure that no small collection of pus, hemmed in by adherent coils of intestine, escaped notice. I then put a plug of iodoform gauze through this opening I had found into the caecal region and incising the abdominal wall above Poupart's ligament I exposed the abscess cavity. Its lining was shreddy, irregular, and in places almost gangrenous, and though I have no doubt that the appendix was the cause of the formation of the abscess I was unable to identify it unmistakably, and unfortunately, therefore, could not remove it. I cleansed the abscess as perfectly as I could by scraping gently, sponging firmly with iodoform gauze, and flushing with boiled water. I then dusted the whole cavity with a little iodoform, and employed a glass tube to drain the general peritoneal cavity and a stout indiarubber tube to drain the caecal region. The patient rallied after the operation much better than we either hoped or expected. He remained in bed for nine weeks, and though in danger for perhaps the first sixty hours there was no doubt after that time that the ultimate issue of the case would be satisfactory. The boy is now quite recovered and as healthy and vigorous as ever.

The class of cases similar to the one I have just described is, of course, almost invariably fatal. There is, I think, excluding accidents, no more serious and hopeless abdominal catastrophe that can possibly occur in males. During the whole of the time that I was house surgeon and resident surgical officer at the infirmary there was not a single case of recovery from this condition. Its peculiar and acute malignancy has been recognised by every surgeon who has written upon the subject, and all agree in considering this complication of appendicitis as among the most fatal of abdominal diseases. In fact, till within the last two or three years not a single recovery had, so far as I know, been put on record, and even up to the present time the successful cases in England number only units. But that recovery should be, and will eventually be, the rule instead of the exception, I feel complete confidence. In pondering over the matter I have thought that it might be possible to formulate certain essentials, on the strict observance of which success in dealing with these cases will mainly depend. These essentials I consider to be:—1. Accuracy in early diagnosis. An ordinary case either of appendicular colic or of appendicitis, when well developed, should be, to most men I suppose is, so far as diagnosis is concerned, one of the easiest and most straightforward that can be met with. But every case, however simple its beginning and uneventful its earlier course, should be watched with the closest interest and intelligence, for the prognosis in any case, be it never so simple, in its earlier stage is wholly uncertain. It is generally supposed that appendicitis, or typhlitis as one used to call it, is, in at least 90 per cent. of the cases, attended by no complications, runs a straightforward uneven course, and eventuates in recovery. But the point that I think needs insistence is that there is during, say, the first twenty-four hours no characteristic symptom or train of symptoms which enables us to dissociate the 30 per cent. recoverable cases from the ten in which sequelæ, varying in intensity from the formation of ordinary abscesses to rapid perforation of the appendix, occur. Therefore, I think the first essential to success is a close investigation, and an almost hourly supervision of any case that may seem doubtful in its initial course in order that should any grave complications ensue they may be dealt with without delay. There can, I think, be no question that in the more or less remote past patients were allowed to die without any accurate diagnosis of their condition being made—a diagnosis, I mean, that tallies with and follows as closely as is possible the

altering pathological conditions in the lesion. In the case that I have just read the onset of the severer symptoms superadded to those of ordinary appendicitis was almost sudden, and it was doubtless at this time that the perforation of the appendix occurred. 2. Early operative interference—this is an essential which can hardly be emphasised in too marked a degree. In every variety of surgical abdominal disease of an acute nature the doctrine of early operative interference has had a rapidly-increasing number of adherents. In no class of cases is it likely to be of more benefit than in those I am now considering. Operative procedures, when carried out sufficiently early, are practically without any risk; it is only when the expectant treatment has been carried to an illegitimate extent that any serious result is likely to ensue. Dr. Ryerson Fowler, who has compiled an able monograph on appendicitis, says: "As soon as the diagnosis of progressive appendicitis is assured the abdominal cavity should be opened and the appendix removed." American surgeons without exception follow his lead in this respect and their results are, beyond all comparison, better than our own.

A surgeon has very naturally no desire to inflict an unnecessary operation upon a patient, but his difficulty very often lies in deciding at what point in the history of a case operative intervention is either justifiable or demanded. And he will find that whatever course he follows he will have some authority of greater or less trustworthiness to support his method. Certain prominent surgeons of the French School (Reclus of Paris and Schmit of Versailles) recommend that the period of the formation of abscess should be fixed upon as the time of election, and that the pus should simply be evacuated without further treatment of the abscess cavity or removal of the appendix. A very few surgeons and a good many physicians would treat all cases of appendicitis medically, or expectantly, until the case recovered or became so ill that operative measures alone would give any chance of life. These methods of procedure I venture to think are wrong. But as some definite ready rule should be adopted to meet the necessities and the requirements of every case I would suggest that the following is perhaps as useful a one as we can draw up at the present time:—"If at the end of a certain well-defined period a case of appendicitis is either stationary or progressive operative procedures should, without any further delay, be adopted." This period the American surgeons would place at the end of twenty-four hours from the first onset of symptoms. This is perhaps a little early, but if an error it is at least an error in the right direction, for it is assuredly better to operate too early and restore the patient to health than to feel compelled to operate too late and unsuccessfully. 3. Thorough cleansing of both the peritoneal and abscess cavities. And by thorough cleansing I do not necessarily mean the flushing of the peritoneum with boiled water or boracic lotion or the like, for this is a procedure which I look upon with the greatest dread. It is, unfortunately, in some cases absolutely essential, but under no circumstances would I adopt it unless forcibly driven to it. I feel sure that its risks are very greatly under-estimated and by some surgeons not in any degree appreciated. Over and over again I have noticed and pointed out to others the profound shock that occurs in almost every case in which flushing of the peritoneum is adopted. At the time that the flushing is being done a manifest improvement in the general condition of the patient occurs, the respirations are stronger and brisker, and the face and lips ruddier, and the pulse quicker and fuller. After an interval of about half-an-hour a very marked reaction, amounting in some cases to complete collapse, comes on and occasionally ends in death—nominally from "shock," in reality, as I believe, indirectly on account of the peritoneal flushing. Unless the peritoneal cavity is in a very bad condition it can be very effectually cleansed and drained by the insertion of tampons of iodoform or other gauze into all the numerous pouches and recesses wherein pus or serous effusion can lodge. This is a procedure which requires time and patience, but on the perfection of its details depends not seldom the life of the patient. After satisfactory proof is furnished of the cleanliness of the peritoneum a sufficient drainage must be adopted, either by means of a Bantock's tube or, perhaps still better, by means of layers and strips of iodoform gauze placed here and there among the intestines where fluid seems likely to collect.

With regard to the asepticising of the abscess cavity I have only one remark to make, to the effect that, if possible,

the appendix, or at least the faulty portion of it, should be removed. Not a few cases are on record where, after the opening and draining of an appendicular abscess had been performed, further attacks of appendicitis have occurred, terminating in at least one case fatally. The treatment, then, in cases of appendicitis may be briefly summarised in this way:—(1) Make an early diagnosis; (2) if at the end of, say, twenty-four hours the symptoms are not retrogressing operate at once; (3) if the case is first seen when abscess has formed do not be content with merely opening and draining the cavity, but, if possible, remove the appendix as well; and (4) if the case be not seen until an early diagnosis of perforation has been made operate immediately, cleansing thoroughly, but avoiding, if possible, lavage of the peritoneum. If this method of treatment be efficiently carried out I believe that a larger percentage of cases will recover than ever before, and that every patient who has recovered will be exempt from any similar attacks in the future. This boy is now in perfectly good health.

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THE ASSOCIATED STUDY OF CRIME AND INSANITY.

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IN the report of the Departmental Committee on Prisons (1895), on certain questions relating to the administration of prisons and the general treatment of prisoners, there are recommendations made with the object of facilitating and promoting the study and detection of insanity amongst criminals and prisoners generally. If it is desirable that the prison medical officer should have some experience of the insane, for considerations of a theoretical and practical (humanitarian) kind, it would appear equally proper, from a theoretical standpoint—although, perhaps, for no practical considerations of an immediate kind—that the asylum medical officer should have some knowledge of criminals and malefactors in general. Working apart, each in ignorance of the other's labours, there is, perchance, some danger lest alienist and criminologist should leave intact the root of the neurotic tree whilst they are busily engaged in lopping off its branches. Reflecting on these lines, it seems strange that the study of crime should have been so dissociated from that of insanity. This separation, I conceive, is ascribable to the predominance of the legal over the medical view of crime, being, in fact, the practical expression of the jurist's desire for order and precision, for definition. Whilst Psychology stood irresolute, debating the subtle question of responsibility and irresponsibility, Law stepped in, established a working principle, and in accordance therewith erected the prison and the asylum. The malefactor and the lunatic have been legally differentiated and—if one may so put it—pigeon-holed accordingly. But this differentiation of the criminal from his degenerate *confrère* has, in the medical view, been wrongly based upon the nature of the offence committed against society, not sufficient regard having been paid to the offender. Individuals have thus frequently been allocated to the gaol whose proper destination was the asylum, where they later have arrived. Even if they were properly consigned in the first instance to prison there is the risk that the system of "education" adopted will be too strictly primitive, so that the criminal will leave gaol at the expiration of his sentence as anti-social as before, and possibly more so. Further, in the anxiety to classify and draw sharp distinctions the borderland cases—the mentally depreciated (Dr. Jules Morel)—who are not, however, wholly irresponsible, have been overlooked. With reference to these it is satisfactory to note that the report of the Committee recommends that as far as possible weak-minded prisoners should be concentrated in special prisons under special medical supervision, and "it should be considered whether it is right to treat such persons as ordinary criminals."

Recently attempts have been made to show that the prison system is productive of insanity and that a considerable amount of the insanity recorded in prisons is due to the treatment therein received. An unbiased inquiry into the cases so recorded would probably show that in the vast majority the insanity manifested itself shortly after admission; in other

words, that in the great majority of the cases the individual was either actually insane or a candidate for insanity on admission to gaol. The Memorandum on Insanity in Prisons which accompanies the report of the Departmental Committee deals with 354 cases of insanity in local prisons in a given year. Out of these it is estimated that only forty-two were sane at the time of admission, becoming insane more than a month afterwards. And for my part, after reading the abstracts of the reports in these cases, I believe that no more than a dozen, approximately, could be regarded as sane on admission. Given, however, the predisposition to mental breakdown the catastrophe would doubtless in many cases be precipitated by such measures as solitary confinement, a limited amount of exercise, and low diet. Prominent amongst irresponsible persons who arrive in prison in consequence of the excessive regard paid to the offence and the inadequate estimate of the offender is the general paralytic in an early stage. In the absence of expert supervision of gaols his malady is likely enough to be overlooked. I am confident that the justice of this statement would be borne out by the experience of every county asylum receiving cases from gaol. Dr. Jules Morel informs me that epileptics are often discovered in the Belgian prisons by the alienist experts attached thereto—a statement we should be quite prepared to hear, as it accords with experience of transfers from gaol to asylum in this country.

One of the chief recommendations, in my opinion, of the Departmental Committee is to the effect that candidates for medical appointments in prisons should be required to show that they have given special attention to lunacy—a recommendation so obviously desirable that one is curious to learn whether it is now brought forward for the first time. Doubtless it was based upon the evidence given by the medical experts called before the Committee, one of whom, indeed, went far beyond this comparatively modest suggestion in respect to the medical officer, maintaining, in fact, that the treatment of prisoners is very much allied to that of lunatics, and is essentially a medical affair. "Crime is a medical question"; such is the view of this witness, who considers that the principal officer of the gaol should be a medical man, just as in the case of an asylum. In this connexion it may be remarked that the insane have undoubtedly been better cared for since medical men were put at the head of asylums.

With regard to the general subject of the study of insanity in prisons, it may be observed that in this respect we do not lag behind the Continent, for it does not appear that any special provision is made for such study in any of the Continental states. In Belgium, however, a more enlightened system, in my opinion, is followed in respect to the detection and treatment of insanity amongst prisoners than in any other State in Europe. According to information derived from Dr. Jules Morel, of the Hospice Guislain, Ghent—who has advocated the adoption of the Belgian system in his visits to this country—the procedure there in force was introduced some five years since by M. Jules Lejeune, ex-Minister of Justice, a highly appreciated *savant*, who ascertained by numerous official reports that there was good reason to believe there were many insane persons in prisons. At that time there was no alienist service in prisons. The Belgian procedure is briefly as follows. Three alienists are attached to the prison, each having under his care nearly ten prisoners. A case of suspected insanity is notified by the governor of the prison to the expert attached thereto. The patient is forthwith visited. If it appears that recovery will occur quickly, or if the case, although of chronic nature, is harmless to himself and his surroundings, treatment is undertaken in the prison; but if the patient is in any way dangerous he is removed to the asylum. These steps are taken independently of the prison medical officer, who, if the alienist lives at a distance, is required to see that the treatment prescribed by the latter is properly carried out. The alienist likewise acts in entire official independence of the governor, and sends his reports direct to the Minister of Justice. The Belgian procedure appears to me to be highly commendable as emphasising in a practical manner the need for coöperation between the gaol and asylum services. The separation of these services in this country is, in my opinion, fundamentally wrong, being unphilosophical because it ignores the connexion existing between the two great degenerations—crime and insanity. We might as well maintain separate and distinct institutions for the study and treatment of different disorders or degenerations of any particular organ other than the