likely to be permanently effective that does not provide for efficient drainage of both pouches, in order to secure healing of the ulcers; hence a double operation is often necessary, and a gastro-enterostomy into one or both pouches is generally advisable.

Of 7 cases in which I performed posterior gastro-enterostomy for hour-glass contraction all recovered, and 5 are well at the present time (three to six years later), 1 died of cancer of the sigmoid flexure of the colon four years, and one of cancer of the stomach a year after operation.

Of 10 cases in which I performed simple gastropasty all the patients recovered, and 6 are known to be in good health at the present time, from three to six years later; 1 was well a year after, but cannot be traced; 1 required gastro-enterostomy two years later for ulcer of the pylorus; 1 was well for four years, had recurrence of ulceration, and died of haematemesis; and one writes to say that after five years she has had some gastric pain, but has not needed medical attendance.

CONCLUSIONS.

Since gastropasty has been followed by 25 per cent. and gastro-gastrotomy by 30 per cent. of relapses, while gastro-enterostomy alone has given much better results, and the combination of the two former operations along with gastro-enterostomy has been uniformly successful, it seems quite clear that whatever procedure is adopted for making a communication between the two stomach cavities, a gastro-enterostomy ought to form part of the operation in order that the ulceration giving rise to the disease may be cured.

PERIGASTRITIS.

Perigastritis leading to disabling adhesions is so commonly associated with ulcer that I must mention it among the principal complications.

When the adhesions tie up the pylorus so as to produce a kink, the normal peristalsis of the stomach may be interfered with, leading to dilatation and stasis so extreme that stenosis of the pylorus may be suspected. If slight, the adhesions may be separated, and the right free border of the omentum may be interposed between the pylorus and its abnormal attachments, so as to prevent close adhesions re-forming, but if the adhesions are extensive a gastro-enterostomy will be found to be the more satisfactory operation, and to give excellent results. If adhesions form on the anterior wall of the stomach, fixing it to the abdominal parietes, normal peristalsis will be interfered with, and the patient's sufferings after meals or on exertion may be considerable; the condition may give rise to irregular dilatation or to hour-glass deformity and to stasis of the stomach contents.

The adhesions must be detached, but are apt to re-form if at all extensive unless the raw surfaces can be covered by sliding the omentum or grafting peritoneum over them.

Simple gastrolisis or detaching adhesions is practically unattended by risk, and in many cases I have seen excellent results by this simple operation; but in several cases relief has been followed by relapse, necessitating a short-circuiting operation. Posterior gastro-enterostomy should under such circumstances be performed where feasible, but in case of adhesions being very extensive, and involving the posterior wall, an anterior Roux's operation will probably be found to be the best procedure to adopt.

In conclusion, I should like it to be understood that I do not advise operation in ordinary acute gastric ulcer, the medical treatment of which should, I think, be much more careful and more prolonged than was formerly considered necessary.

Nor do I advise operation in chronic ulcer before medical treatment has had a fair trial; but I think it is unfair to our patients to advise a continuance of general treatment for chronic or relapsing ulcer until serious complications supervene, when by timely surgical treatment many of them can be prevented.

In perforating ulcer, in chronic or relapsing haemorrhages, in pyloric obstruction or other mechanical causes leading to dilatation, medical treatment is as inadequate and useless as is operative treatment in gastric neuroses and other functional diseases, and to continue it beyond the period in which it can benefit, is as unscientific and unwise as it is to operate and expect good results in improper cases.

OPERATIONS UPON THE LOWER PART OF THE COMMON BILE DUCT.*

By B. G. A. MOYNIHAN, M.S., F.R.C.S.,
LEEDS.

WHEN a stone enters the common bile duct from the gall bladder, it does not, as a rule, travel far before it is arrested. The common duct, as is well-known, is funnel-shaped, narrowing gradually as it descends towards the duodenum. A stone entering it and fitting quite loosely in the upper part, may be soon checked in its downward passage owing to the lessening calibre of the duct in which it lies. An important factor in the retardation of the stone is doubtless a spasm of the muscular fibres existing in the duct wall. Before long the stone begins to increase in size and may be joined by others entering from the cystic duct. The larger a stone becomes the less likely is it to pass onwards into the duodenum. The increase in size of a stone lying stationary within the duct is probably rapid. In not a few operations I have found a stone which, to judge by the clinical history, has lain in the common duct not more than two or three months, to be of the size of a nutmeg or an olive, when other stones in the gall bladder (the cystic duct being patent) are only one-quarter or one-sixth of that size. The calculus on its escape from the gall bladder may have been larger than its fellows, but the added deposit upon it has been sufficient to remove all traces of facets.

Calculi are therefore found during operation more frequently at the upper than at the lower part of the duct. The removal of a stone from the first part of the duct is now a comparatively common operation. There are, however, a certain small number of cases in which the stone is arrested and fixed in the second and third portions of the duct or in the ampulla of Vater and must be directly removed therefrom. Such operations are still so uncommon as to be worthy of individual record.

OPERATIONS UPON THE SECOND AND THIRD PARTS OF THE COMMON DUCT.

The second part of the common duct—the retro-duodenal or pancreatic portion—is 1 to 1½ in. in length (see Fig. 1); it lies behind the duodenum and in contact with the pancreas, either in a groove or in a canal in the head of the gland. The third portion of the duct—the transduodenal or pancreatic portion—lies in the inner and posterior wall of the duodenum, and terminates at the diverticulum of Vater; it is about ½ to ¾ in. in length. These parts of the duct may be approached in one of two ways: (a) from behind by retroduodenal choledochotomy, (b) from the front through the duodenum by duodeno-choledochotomy.

(a) Retroduodenal Choledochotomy.

This operation was first described by Haasler in a paper read before the German Surgical Congress in 1898. Similar procedures have been carried out by Oscar Bloch and Berg. The principle of the operation consists in the making free of the duodenum by stripping up the peritoneum on its outer side, so that when the duodenum and the pancreas are turned over to the left the stone can be seen and felt projecting posteriorly, and be removed by incision of the sclerosed pancreas which covers it. After removal of the stone the duct is explored for other calculi and is then closed by suture; drainage is always necessary, for the duct, being here devoid of a peritoneal covering, does not heal rapidly or securely. I have never performed this operation, and I will not therefore describe it in detail.

(b) Duodeno-choledochotomy.

Of this operation there are two varieties, according as to whether the common duct is opened in its second or its third portions or whether the ampulla of Vater is opened. If the duct itself is incised, the operation is known as transduodenal choledochostomy, or Kocher's operation (Figs. 2 and 3); if the ampulla is opened, the operation is known as duodeno-choledochotomy, or McBurney's operation (Fig. 4). The former will be described first:

* A paper read before the Yorkshire Branch of the British Medical Association.

Transduodenal Choledochostomy, or Kocher's Operation.

In order to get at a stone impacted in the second part of the duct from the front it is necessary to divide both the anterior and posterior walls of the second part of the duodenum and then to incise the pancreas which lies around the duct. This operation was first performed on June 4th, 1894, by Kocher, and was described by him as "internal choledochoduodenostomy."

When the calculus has been impacted in the duct at this part for any length of time, the pancreas which lies between the duct and the inner and posterior part of the duodenum has probably become somewhat atrophied by pressure and sclerosed as a result of chronic inflammation. In my own cases it has been so altered as to be barely recognizable as pancreatic tissue, though it was evident that the gland had been divided, because after incision of the posterior wall of the duodenum a very dense and thick fibrous layer was encountered before the duct was opened. The incision in the gland causes no ill effects.

The preliminary steps of the operation are those necessary in all common duct cases. A sandbag—or better, an inflated rubber cushion—is placed under the back behind the lower dorsal vertebrae, Mayo Robson's incision is made, the rectus divided, and the liver elevated. In making the separation of the fibres of the rectus muscle the following method is desirable:

As soon as the anterior sheath of the rectus is divided a gentle separation of the fibres of the muscle at one of the tendinous intersections is effected by scratching gently through with the finger covered with gauze. As soon as a little space is cleared the finger is then used softly to wipe or push aside the fibres, when it will be found that the nerves, as they lie on the front of the posterior sheath, are left intact. There are generally three nerves, one above, one below, and one in the middle of the wound (tenth, eleventh, twelfth dorsal). In the gap between these nerves all the necessary manipulations can generally be accomplished. The importance of the nerves which supply the inner separated portions of the rectus muscle cannot be exaggerated. Assmy, working under Czerny's direction, has shown that atrophy of the inner part of the rectus, and consequent hernial protrusion, follow the sacrifice of the nerves.

As soon as the abdomen is opened a general examination of the parts is made and the procedure determined. Cholecystotomy or cholecystectomy may be necessary in addition to the removal of the stone by the method now to be described. If the patient is thin, and if the liver lies low, the lifting and rotation

of the liver will generally leave a clear way to the duodenum, but in stout patients, with many adhesions, it may be a matter of no little difficulty to reach

the bowel. The duodenum must then be rendered mobile by the procedure described by Kocher. A vertical incision is made about 1½ in. to the outer side of the duodenum, and the peritoneum stripped inwards to the duodenum from this point. When the intestine is reached the stripping is continued, the duodenum and the head of the pancreas being raised up towards the middle line. In this way it can be secured that with a couple of fingers behind the duodenum, or in the foramen of Winslow the bowel can be raised up to the abdominal wound. The fingers which so support the bowel must remain steady throughout the duodenal manipulations, and must be protected from soiling by being covered with a flat gauze swab. When the duodenum is held secure, and the stone is localized, the anterior wall of the duodenum is incised, and a small volsellum placed on each edge of the wound. The fluids escaping from the duodenum are mopped up and the posterior and inner wall of the bowel examined. The bulging over the stone will then be readily discernible, and at a little distance below it the ampulla is seen. If the stone can be pushed downwards and extracted through the ampulla this should be done, but if not (and I have never been able so to do) then the duodenum is incised directly over the stone.

The incision is carried at once down to the stone over a part of its projecting surface. Then a stitch is taken on each side through all the tissues between the stone and the duodenal wall. These sutures are of catgut, and they are useful to steady the walls of the duct in the subsequent explorations. As soon as the sutures are tied (the ends are left long—Fig. 5), the incision over the stone is lengthened to a degree sufficient to allow of the easy removal of the calculus. When the stone is taken away a third stitch is taken at the extreme upper end of the incision; this also embraces the duct, the pancreas, and the duodenal wall. As soon as the stone is removed bile begins to flow into the intestine, but other stones may nevertheless be present in the ducts above. A scoop is therefore passed upwards as far as it will go, generally about 4 in., and the duct emptied. When it is certain that no other stones remain, the sutures (which have been useful as retractors) are cut short. It is not necessary always to introduce any other stitches, though Kocher advises that this should be done. If the second portion of the duct has been opened leakage of bile through the

Fig. 1.—Section of the duodenum and the head of the pancreas, to show the second and third portions of the common bile duct and the ampulla of Vater.

Fig. 2.—Stone impacted in the second part of the common bile duct. Such a stone could be removed by retroduodenal choledochotomy or by Kocher's operation.

wound is possible, though it is not likely on account of the fact that, owing to the large size of the stone, the duct has probably been brought into close contact with the wall of the intestine. If the opening is well above the papilla, sutures should therefore be introduced; if the opening implicates only the interstitial (third) portion of the duct, they are not needed. If they are considered necessary, they should be of catgut and "through-and-through" sutures.

At this point there remains only the anterior incision in the duodenum to be closed. This is done in the usual manner, by two layers of stitches, the inner embracing all the coats of the gut, the outer only the serous and muscular coats. An omental flap may well be sutured over the duodenal incision also.

The fingers are now removed from behind the duodenum, and the bowel allowed to fall back into its natural position. If neither cholecystotomy nor cholecystectomy have to be performed, the abdomen may be closed without drainage. The advice is, I find, constantly given that a drainage tube should be passed down to the duodenum, but I have not found this necessary. The wound in the gut involves a surface clad with peritoneum, and healing therefore occurs quite securely.

If the third portion of the duct is involved the duodenum is of course not divided completely through on its inner and posterior part. This portion of the duct lies actually in the duodenal wall, and therefore in order to open the lumen of the duct the duodenum is cut into, but not through.

I have performed this operation in 3 cases, all successful. The following are the notes:

Mr. N., aged 56, sent by Dr. Bastow Cooper, Lincoln. The patient had had occasional attacks of severe pain in the right hypochondrium for four years; the attacks were accompanied by sickness. In February, 1905, a similar attack followed by jaundice, which, set first very deep, gradually lessened until another attack of pain in April, 1905, after which it became very much deeper. Between April and September attacks of pain followed by deepening jaundice occurred about once a fortnight. In between these attacks the jaundice never lessened and no bile ever passed into the intestine. He was more deeply jaundiced than any patient I have ever seen. In the attacks he had shivering and nausea; each attack lasted from half an hour to two days. A diagnosis of stone in the common duct was made and operation was performed on September 28th, 1905. The abdomen was opened through Mayo Robson's incision. The gall bladder was found shrunken and empty and adherent to the duodenum. A stone was felt in the second portion of the common duct just below the upper margin of the duodenum. A prolonged attempt to push the stone upwards into the supraduodenal portion of the duct was unsuccessful. The duodenum was therefore held secure in the fingers of the left hand, and its anterior wall opened by a

longitudinal incision. The [duodenal] edges were seized in small vulsella, and an inspection of the duodenum made from within. A bulging of the inner and posterior wall of the gut was seen, and behind this lay the stone, fully $1\frac{1}{2}$ in. above the ampulla of Vater. An incision was made over the stone. The stone even when well exposed was extracted with some difficulty; it seemed to have grown into the wall of the duct, and its outer surface was rough and "spiky." After the stone was removed the duct was explored with the finger and with a scoop, but no other calculi were felt. No stitches were introduced into the posterior duodenal wound. The anterior wound was sutured and the abdomen closed. The patient recovered rapidly. By January, 1906, he had gained $1\frac{1}{2}$ st. in weight, and was perfectly well.

Mr. J. V., aged 52, sent by Dr. Lambert, Karsley. The patient had noticed a dull aching pain in the gall-bladder region five months ago; this lasted ten days, and was followed by jaundice, which has never cleared off since. He has had attacks of pain, shivering, nausea, followed by deepening jaundice ever since. The jaundice almost disappears between the attacks. A stone in the common duct was diagnosed, and operation performed on November 3rd, 1905. The abdomen was opened through Mayo Robson's incision. The gall bladder was shrivelled and buried in a mass of dense fibrous tissue. A stone was felt in the retroduodenal part of the duct; it was fixed. The duodenum was therefore opened, and about 1 in. above the papilla the bulging of the stone on the posterior and inner wall was seen. An incision was made down to the stone, which was readily extracted. No sutures were introduced in this incision. The duodenum was closed, and as there had been some soiling of the parts a drainage tube with a gauze wick was left in for five days. The wound was slow to heal, but in five weeks was perfectly sound. The patient was seen on February 28th, 1906. He had gained 2 st. 2 lb., and reported himself as "quite right."

Mrs. B., aged 56, sent by Dr. Hutton. The patient has suffered for many years from indigestion, "spasms," flatulent distension of stomach, but has never jaundiced. The present illness dates back three months, when she was taken ill with shivering, vomiting, and dull abdominal pain, followed by jaundice. Since then similar attacks have occurred at intervals of about a fortnight; the jaundice becomes slightly less in the intervals, but by no means disappears. The pain, which is not severe, is felt down the right side of the abdomen and up to the scapula. The stools are light coloured. On examination, February 24th, 1905, a stout woman with marked jaundice. Liver edge felt in the gall-bladder region, which is tender. Operation, February 25th, under ether and CHCl₃. Mayo Robson's incision. Duodenum firmly adherent to gall bladder, which was almost hidden among dense adhesions; by invaginating the duodenum with the finger the crateriform hollow of a deep ulcer could be felt where the gut was welded to the gall bladder. A calculus was felt in the hepatic duct and pushed down into the common duct. A stone was also felt impacted and immovable in the common duct, just above the ampulla. The duodenum was opened and its posterior wall incised over the stone, which was extracted. Three more stones were then taken from the common duct, and finally a probe passed up for 5 in. into the hepatic duct. The anterior wall of the duodenum was closed with a continuous suture in two layers;

Fig. 3.—Stone impacted in the third portion of the duct. Such a stone would be removed by Kocher's operation.

Fig. 4.—Stone impacted in the ampulla of Vater. Such a stone would be removed by McBurney's operation.

a covering of omentum was fixed over the suture line by two interrupted sutures. Abdomen closed without drainage.

Duodeno-choledochotomy; McBurney's Operation (Ampullary Choledochotomy).

In cases where this operation is performed the stone is arrested in the diverticulum of Vater, having passed down the whole length of the common duct. The stone is usually small, about the size of a split pea. The operation in all its details is similar to that which has just been described, except that the incision in the anterior wall of the duodenum is made a little lower down. As soon as the duodenum is opened the stone may be seen protruding through the ampulla, and a little frothy bile-stained fluid may escape past it. In McBurney's first case an attempt was made to extract the stone by dilating the orifice of the ampulla, but this was not successful. The edges of the opening were therefore incised, and the stone extracted.

As soon as the stone has been removed, small vulsellæ should be placed on the lateral edges of the opening, and a gall-stone scoop passed upwards into the common duct. The duct is always dilated, and some fine stones or sand may be removed. In some cases an opening may have already been made in the supraduodenal part of the duct for the purpose of extracting a stone impacted there, the later opening of the duodenum being necessary because of the impossibility of displacing the ampullary stone upwards. If this has been the case, it is well to pass in through the supraduodenal opening a wick of gauze, which is brought out at the ampulla. On pulling a long strand of this through the duct, some fine sand or grit or small stones may be removed.

In both this operation and in Kocher's operation a longitudinal incision is made into the duodenum through the serous-covered anterior surface. Such a wound, when carefully sutured, heals well. Several operators record cases of duodenal fistulae following these operations, and I think it not improbable that this has been due to drainage of the wound. The drainage material has adhered to the suture line, and has, when removed, torn open the wound. I have never drained down to the duodenum in any of my cases, but have always sutured carefully, and have made assurance doubly sure by laying over the line of stitches a flap of omentum.

The following is a list of my cases, seven in number. The first case was fatal, the last six have been successful:

CASE I.

Mrs. T. B., aged 39, seen with Dr. Spruille, Mirfield. Three years ago she had an attack of epigastric pain and vomiting, followed by slight jaundice—a typical attack of biliary colic. Since then she has had nine similar but progressively more severe attacks. Nine weeks ago an extremely severe attack.

Pain has continued all the time, and jaundice, though varying slightly, has always been pronounced. The motions during this period have been light coloured, the urine thick and scanty. Pain is constant, but at times an acute paroxysm occurs. Has lost flesh rapidly during the last two months, and has been eating little, owing to pain and heaviness after even light diet and vomiting.

Operation.—December 7th, 1900. Eighty-seven gall stones were removed, mostly from the hepatic and common ducts. A few lay in the gall bladder, but both hepatic ducts and the whole length of the common duct were filled with tightly-packed stones. These were removed through an incision in the common duct, which was afterwards sewn up. A stone was found tightly impacted in the ampulla of Vater, and the duodenum had to be opened in order to remove it. The patient had severe hæmatemesis after the operation, and died on the third day.

CASE II.

Mrs. M. A. R., aged 41. Calculus in the ampulla of Vater; chronic pancreatitis; duodeno-choledochotomy. The patient was admitted on March 23rd, 1901. The history was that attacks of pain in the right hypochondriac region had been intermittently present for eight or nine years. Sixteen months before admission jaundice was noticed for the first time. Similar attacks of pain followed by jaundice had been noticed several times since that date. On admission she was jaundiced, and the colour had been present, though varying in tinge, for four months. A stone in the common duct was diagnosed. The abdomen was opened, and a stone was found impacted in the ampulla of Vater. The head of the pancreas was densely hard—as hard as stone. I remarked at the time that the gland felt more like a plaster cast of a large pancreas than like a normal organ. The duodenum was incised and the stone was removed. The gall bladder was drained for eleven days. The patient made a good recovery, and is now quite well. (March, 1906.)

CASE III.

Mr. J. A. E., September 24th, 1902. For the last four and a half years has suffered from acute pains in the right

hypochondrium. After an attack of the normal kind he became jaundiced nine weeks ago, and since then has remained jaundiced more or less. For the first month the jaundice steadily deepened; then a rigor occurred, and the jaundice became still more intense, but quickly got less. Now jaundice is not more than sallowness. Has had three rigors recently, with slight increase in jaundice after each attack. At the operation a small stone in the ampulla of Vater, and a few gritty particles in the gall bladder. The duodenum was opened, and the stone removed from the gall bladder. Cholecystotomy was performed. The patient recovered. In March, 1906, reported as having been quite well since the operation.

CASE IV.

Mrs. A. D., aged 39, sent by Dr. Handcock, Scarborough, July 11th, 1903. Seven months ago patient began to suffer from pain in the right hypochondrium, collapse, faintness and vomiting. The first attack was followed at once by jaundice. Between this and five weeks ago had at least six attacks. Five weeks ago after a similar attack a stone was passed and was recovered from the faeces, but since then jaundice has been continuously present, though variable in

Fig. 5.—Kocher's operation. The duodenum opened; its posterior wall incised to show the stone.

depth of tinge. Every few days lately has had attacks of shivering and slight pain. Operation was performed after a diagnosis of stone in the common duct had been made. A stone the size of a split pea was removed from the ampulla through the duodenum. The gall bladder contained stones (forty-eight were subsequently counted); it was therefore aspirated, and clear mucous fluid removed. A few small stones were immovably fixed in the cystic duct. The gall bladder was therefore removed and a drainage tube introduced into the junction of the hepatic and common ducts. Recovery was uneventful. In March, 1906, reported to be quite well.

CASE V.

Mr. G. K., aged 53, sent by Dr. La Touche, Ossett, July 25th, 1903. Cholecystectomy; duodeno-choledochotomy. The patient had suffered for a "great many" years from pain after food, nausea, belching, distension of stomach. Four months ago, after a severe attack of pain became jaundiced, and has remained so since then. There have been many attacks of pain, nausea, shivering followed by deepening jaundice. There has been a loss of over 2 stones in weight. Stone in the common duct was diagnosed. At the operation a hard, shrivelled gall bladder with a few stones in its contracted cavity was felt, and a single pea-like stone in the ampulla. The duodenum was opened, the ampulla exposed, and a small stone seen to be projecting through its orifice. The opening was enlarged slightly and the stone removed. A scoop passed up the duct discovered no other stone. The gall bladder was then removed, as the cystic duct was found blocked, and a drainage tube passed into the hepatic duct. The patient recovered, and remains well to-day, having gained over 2 stones in weight. (March, 1906.)

CASE VI.

Mr. T. H., aged 42, April 25th, 1904. Cholecystectomy. duodeno-choledochotomy. The patient has suffered for years from "chronic dyspepsia." Three years ago he had an attack of very severe pain followed by jaundice. Five months ago a similar attack, and since then has never been free from jaundice. Has had attacks of very slight pain, and slight deepening of the jaundice; but his colour has never been more than "sallow." At the operation a gall bladder with thickened walls was found to be full of stones. The common duct was very much dilated, and a stone the size of a small Barcelona nut was felt in the lower part of the duct. The duodenum was opened to remove this, and the stone was seen through the orifice of the duct (I doubt if the ordinary form of "ampulla" was present). The opening was enlarged and the stone removed. The gall bladder was then opened, many stones removed, and a drainage tube placed in it. The patient recovered, and reports himself well in February, 1906.

CASE VII.

Mrs. M. N., aged 36, January 26th, 1906, sent by Dr. Cass, Ravenglass. For two years the patient had suffered from gall stones; there were attacks of pain in the right hypochondrium, followed by jaundice. In August last a very severe attack with a rigor and jaundice. Since then has been continuously jaundiced, though at times, if free from pain, the jaundice has almost gone, and the urine and faeces have been normal. Her last attack was on December 26th, 1905. When seen on January 26th, 1906, was very slightly jaundiced. Operation January 31st. The abdomen was opened through the right linea semilunaris. A stone was felt at once in the ampulla. The duodenum was opened by a longitudinal incision and the calculus extracted. The gall bladder was contracted and thickened; it contained four stones. Cholecystectomy was performed. Uneventful recovery.

For the drawings which illustrate this paper I am indebted to Miss Ethel M. Wright.

An Address

ON

SELF-RESTRAINT IN SURGERY.

DELIVERED AT THE OPENING MEETING OF THE
BRADFORD DIVISION OF THE BRITISH MEDICAL ASSOCIATION,
OCTOBER 9TH, 1906.

BY BASIL HALL, M.C.CANTAB.,

HONORARY SURGEON, BRADFORD ROYAL INFIRMARY.

WHEN your secretary asked me to give you a short introductory address to-night, my first impulse was to refuse, but on second thoughts, I fell in with the proposal because I felt that by so doing I should be establishing a precedent which may be followed by others who are more capable than myself. If, therefore, what I have to say is commonplace, I hope it will at least have the merit of being the forerunner of future addresses well worthy of a hearing. Nevertheless, I think that the subject I have chosen is one which we may all ponder over for a few minutes with advantage.

Surgery to-day is rapidly approaching the position of an exact science. The art of surgery has reached a degree of excellence that our forefathers never dreamt of, and in our enthusiasm we are apt to forget the old surgical axiom, "*Primum non nocere*" ("Above all do no harm.") That must be the motto ever present in the surgeon's mind, and one which should be writ large in every operating theatre.

Are we not nowadays rather in danger of underestimating the evil consequences of being too ready to resort to surgical interference? I am afraid that we must admit that there is a decided tendency in that direction. Hasty operation is the outcome of two widely different impulses. On the one hand, the timid surgeon is driven to premature and perhaps unnecessary interference by his fears of the possibilities present or to come. He argues with much plausibility that it is "better to be on the safe side," and that the consequences of unnecessary operation are as nothing when compared with the possible dangers of delay. "When in doubt, operate," is the modern surgical axiom; and, while we must all agree that it is sound as a general rule, its influence insidiously extends beyond reasonable limits, and cannot, therefore, be too carefully guarded against. On the other hand, to the surgeon of large experience, resort to operation comes easily, especially in hospital practice, where the possibility of catastrophe is reduced to a minimum by the facilities afforded for perfect technique. Probably he has arrived at that stage of his career when he has little opportunity to study ultimate results, and consequently he only infrequently realizes that immediate success has been obtained at the cost of more or less permanent disability.

This tendency to hasty operation is without doubt due to the reaction which has set in as a result of the disastrous consequences of the many "too late" operations in the past; and, whilst there can be no question that the saving of life has been enormously increased thereby, it behoves us all to take care that the pendulum does not swing to the opposite extreme, and so discredit the profession in the eyes of the public.

That there is a real danger of such an occurrence is evident from the fact that a distrust of the surgeon has grown up of late years in the lay mind. It must be a common experience amongst you all to find patients asking for a preliminary opinion from what they are pleased to term a "non-combatant." They argue that the surgeon is sure to recommend an operation, and that he cannot be relied upon to give disinterested advice. Practitioners have brought this to my notice again and again, and patients not infrequently come and ask to be operated upon because Dr. "So-and-So" has advised it. They assume that the surgeon is only too ready, and that his only object is to obtain a fee. If this attitude once becomes an established one, surgery will be reduced to the level of a trade, and we shall cease, once and for all, to hold that honourable position of which we are so justly proud.

One of the worst effects of this hasty resort to operation is the tendency to neglect clinical observation and shirk accurate diagnosis. "God intended you to use your eyes first and then your hands" was the dictum of a still famous surgeon, and one which he was never tired of impressing upon his hospital class. Now it is in our hospital residents that we most clearly see the modern attitude reflected through the medium of their teachers, and no one who is attached to a hospital can fail to recognize the change which has taken place in the house-surgeon of recent years. His interest is centred almost entirely upon major operative surgery. He can safely be entrusted with the after-care of an abdominal operation. His aseptic technique may be beyond reproach, but give him a non-operative case where careful observation and close attention is required, and he not uncommonly proves a failure. The case bores him, and he frequently hints that it ought to be transferred to the physicians. Aseptic fanaticism has been so impressed upon him, that he leaves suppurating wounds to the care of a nurse. He scorns the idea of employing drainage in wounds, considering it a confession of weakness. He frequently fails in minor surgery because his interest in it has never been stimulated and because he honestly regards it as too trivial to be worth his attention. He considers that crushed fingers are better "lopped off" to use his own phrase. He has forgotten the old axiom that "amputation is the reproach of surgery." His powers of