AFTER-TREATMENT.

The time at my disposal has not allowed me to do more than to speak cursorily of the more common affections met with in abdominal surgery, and I have not dealt with any of the rarer conditions which one must be prepared to encounter. We may now consider the after-treatment.

A pillow placed under the knees relieves the strain of the abdominal muscles; and the patient may, with advantage in most cases, be tilted to one or other side by placing pillows behind the shoulders and buttocks. This often gives great relief from the aching in the back which is so common in these cases. The pain of abdominal operations is not usually great, and in most of them no anodyne is necessary; but when pain is severe morphine may be given during the first twenty-four hours. After that period no morphine is allowed, for unless the case is not doing well, pain at this time is nearly always due to flatulence, and the best remedy for this is a turpentine enema. The relief from pain and distension is so marked after the administration of a turpentine enema that it may well be regarded as the "sheet anchor" of the after-treatment of abdominal operations. It may be repeated night and morning if necessary. In any case it is desirable to give an enema on the morning of the third day, and a purgative by the mouth on the third night, after operation, if the bowels have not previously acted. Should there be any suspicion of the onset of peritonitis, a dose of calomel should be given, followed by the administration of 2-drachm doses of sulphate of soda every hour until purgation is effected.

I prefer cases of operation on the stomach to have nothing by the mouth for twenty-four hours at least, if possible; but in other cases hot water may be given by the mouth whether there is vomiting or not. It relieves the thirst which nearly always occurs after abdominal section, and helps to stop vomiting better than any other remedy. It should be given very hot, and in tablespoonful doses, three or four times an hour, if necessary. I consider it a needless cruelty to prolong the sufferings which the patient endures from an intense craving for fluids. In cases of extreme thirst half a pint of water may also be given two or three times a day by the rectum, and retained. If there is vomiting, nothing but hot water should be allowed by the mouth, but when the vomiting continues for a long time this may sometimes be advantageously supplemented by small quantities of dry champagne. Under these circumstances the strength should be supported by the administration of nutrient enemata consisting of half an ounce of brandy, a teaspoonful of some beef essence, and made up to four ounces with peptonized milk. These should be given every four hours, and before each enema is injected (and for this purpose a tube and funnel are best) the rectal tube should be worn for a quarter of an hour to allow of the expulsion of flatus. One of the best signs of recovery from shock is the power of expelling flatus voluntarily, and where this has been gained, cases practically always do well. If the anaesthetic vomiting passes off quickly, water gruel, followed by Benger's food or peptonized cocoa, may be given in small quantities during the first twenty-four hours. No raw milk should be allowed; it forms a coagulated mass which upsets the majority of patients. On the second day tea, bread and butter, toast, custard pudding, junket, and grapes may be allowed, but the quantities should be limited. On the third or fourth day, if the bowels have acted, a little fish may be given, and thereafter the diet may be gradually improved in quantity and quality. The patient's feelings serve as an excellent guide to the amount and character of the food taken, and in the early days it is not wise to force food upon an unwilling patient.

REFERENCE.

¹ BRITISH MEDICAL JOURNAL, August 14th, 1897.

THE late Mr. Simeon Lazarus, of Bournemouth, who died on October 11th, 1906, left £50 each to the London Hospital, the Brompton Consumption Hospital, the City of London Hospital for Diseases of the Chest, and the Jewish Hospital for Incurables, and £25 each to the Royal Hospital for Incurables and the Cancer Hospital.

UNDER the will of the late Miss Martha Axford of Ealing, who died on October 20th, 1906, St. Mary's Hospital, Paddington, the Friedenheim Home for the Dying, and the Mildmay Mission Hospital, Bethnal Green, each receives a sum of £200.

THE CLAIM OF THE SURGEON TO CONDUCT THE AFTER-TREATMENT OF OPERATION CASES:

WITH SOME REMARKS ON POSITION, AND FLATULENT
DISTENSION, AFTER ABDOMINAL OPERATION.*

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I SHOULD be very sorry to think that the title of my paper† should suggest to the mind of any one, that I think post-operative treatment should, as a rule, be handed over by the operator to any one else or even shared with another. But there are conditions in which, unfortunately, this must be so, and, therefore, I should like to draw your attention to two important matters in connexion with the treatment of cases after abdominal operations. Before doing so, however, I will spend a few minutes in pleading for the operating surgeon that he shall be allowed to conduct his own after-treatment whenever possible.

THE DIRECTION OF THE TREATMENT.

I think the only reasonable view we can take of the matter is that the medical practitioner who has been in charge of the case up to the time the operation is performed should hand over the treatment entirely to the surgeon who has taken the responsibility of operating, for the success or failure of an operation may to a large extent depend on the after-treatment.

Let me appeal to you in this way. If you have a very anxious midwifery case, and have perhaps had to turn, and had trouble from haemorrhage, or fear it, would you care to hand over the care of that patient to any other medical man? Suppose, now, you were a practitioner of special experience in that branch of work, and had in consequence been requested to take charge of the labour, would it fair to your patient to hand over the after-treatment to another practitioner with less knowledge and experience of such work? Again, suppose that instead of being a medical practitioner you were a watch repairer, and something had gone wrong with a watch brought to you for repair, which required work of a very special kind you were not accustomed to and had received no special training for, and you passed on that watch to another worker who possessed the special skill, would it be right for you to demand back that watch to regulate it instead of leaving it under the care of the specially-skilled worker until he considers it is going quite well? I need not reply to such a question. And yet sometimes objection is raised if the surgeon conducts the after-treatment of cases he has operated on himself. The practitioner feels a sort of possession in his patient and regards the surgeon as robbing him of his patient if he does more than the actual operation. But surely the surgeon who has undertaken so important and responsible a part of the treatment as an operation may justly regard the patient as his until the after-treatment of the operation is at an end. I do wish we surgeons could only get some of our friends amongst the general practitioners to see that we do not wish to conduct the after-treatment in these cases in order to make larger fees. As a rule we do not make larger fees in this way; it is only in cases in which we have to spend a considerable time in making lengthy journeys to reach our patient that the after-treatment is considered in the fee at all. But supposing it were, I still think that it is as much the surgeon's work as the actual operation, and he would, therefore, be entitled to remuneration for it. It is a well-recognized principle in hospital practice that when a surgeon operates on a case he conducts the after-treatment, and if the patient has been under a physician in a medical ward up to the time of operation, he is transferred to the surgeon's ward after. Unfortunately, some medical men cannot see that this is the right line to adopt in private practice also, though the lay mind, untrammelled by any idea as to the possession of the patient, at once grasps the right principle—that the one

* A paper read at a meeting of the Bath and Bristol Branch of the British Medical Association.

† The original title was "The Treatment of Cases after Abdominal Operations."

who undertakes the operation is the one to carry the treatment through, and they sometimes ask that it may be so. There are, of course, occasions when the surgeon can only carry out the after-treatment very imperfectly—by leaving suggestions, by letter, and by telephone, as when he is called into the country to operate on a patient too ill to be moved; but in all cases in which the patient can travel I think he should come into a nursing home, under the care of the surgeon, unless he lives in his immediate neighbourhood. I have several times refused to go into the country and operate on cases which might quite well have come to a nursing home here, because I do not think that operating under such conditions gives the surgeon the greatest chance of success. I have been told that such patients will not leave home, or must have their own doctor in attendance; but if practitioners would fairly represent the just claim of the operating surgeon to conduct the post-operative treatment himself, and the advantage this would be to the patient, I do not think we should hear of these objections.

We must recognize the fact that sometimes a patient is suffering from a medical ailment—that is, one for which no surgical treatment is required—and at the same time another condition requiring operation. Let me give as an illustration a case of pneumonia with pneumococcal peritonitis, or a case of phthisis with acute suppurative appendicitis. I admit that the divided treatment of such a case between the medical attendant and the surgeon is full of difficulty, but I think the right course to adopt is for each to undertake the treatment of his respective department of the patient (if I may use such an expression), and to conduct that treatment in consultation. Again, if a medical ailment which has nothing to do with the disease for which the operation was performed should supervene—such as an attack of gout in a patient operated on for tumour of the jaw—it seems to me right that the treatment should be conducted jointly by the practitioner previously in charge of the case and the surgeon.

Allow me to suggest that if one of us had an obscure abdominal disease, and some professional friend in whom he had every confidence as a physician, when treating him, discovered that the disease was one which should be dealt with by operation, he would prefer the surgeon to conduct the post-operative treatment rather than the trusted medical friend; and if he would in his own case, why should he not readily fall in with such an arrangement in the case of his patient? If you are well skilled in surgical methods, and thoroughly competent to undertake the after-treatment, will you not let the surgeon who performed the operation follow any special line of after-treatment he may have a particular leaning to, even though you feel that your methods are the best? Is not this what the operator may fairly claim?

It may be objected that post-operative treatment is very largely what may be called medical treatment, such as diet, or even the use of drugs, etc. I fear we modern surgeons are still regarded by some as very much like the old barber surgeon, only fit to cut and to manipulate, a mere mechanical worker, who if he has any brains worth considering has no right to use them in directing anything but the cutting and sewing up. But really there is no detail in the post-operative treatment which does not concern the operator, from the method of fastening the binder to the management of the feeding and sleeping of his patient.

THE POSITION OF THE PATIENT.

I propose now to consider an important detail of the after-treatment of abdominal operations—the position of the patient, and one complication which may be very serious—flatulent distension.

After certain abdominal operations, the position of the patient is one of the most important matters in the after-treatment. In all cases in which drainage of any quantity of fluid from the abdomen is desired the patient should be kept in the half-sitting position—that is, with his chest well propped up on pillows. This is of the greatest importance in acute suppuration in the abdomen, especially when diffused, as in peritonitis. It has been strongly advocated in such cases by some of the American surgeons, and is sometimes spoken of as Fowler's position. In suppurating appendicitis not only must the chest and upper abdomen be raised higher than the lower abdomen, but the left side of the abdomen must also be propped up on pillows, so that the right lower abdomen,

from which the drainage tube will protrude, is the lowest part of the abdominal cavity, except the true pelvis. In order to judge if his patient is at a right slope, it is necessary to inspect the abdomen (of course covered with the dressing) after or during the adjustment of the pillows or bed-rest. We must not be content with the apparent position of the abdomen from inspection of the patient covered with the bed-clothes. We should not leave the arrangement of the position of the patient to the nurse, unless we feel sure she knows exactly how to place the patient, from her experience in other cases.

It is by no means easy to maintain the sloping position, as the patient is always tending to sink down from the pillows or bed-rest. If the patient is inclined to have his legs extended, a box or hassock between the turned-up mattress under his feet and the bottom of the bed will keep him up, but this of course fails when he bends his knees. A firm pillow under the bent knees is then of some use, but better still is a sling made of cloth, in which the patient sits, and which is attached to the head of the bed. The sling comes down one side of the body, under the buttocks and perineum, and up the other side. It would of course be useless unless the thighs were flexed, as it would not get enough hold of the patient, but if the lower limbs were extended the patient could be supported by the hassock under the feet. The sling would of course have to be undone from time to time for enemata if they were required, unless an opening made in it could be kept in the right position.* The tilting up of the end of the bed is an entirely inadequate substitute for the sloping position of the patient's body. To get the same degree of slope the head of the bed would have to be propped up at half a right angle to the floor.

How long should this position be maintained? In cases in which it is done to prevent pus running up into the higher part or other side of the abdomen, as in draining a localized but not well-shut-off appendix abscess, twenty-four hours will be long enough, as by that time protective adhesions will have formed. If, however, such a suppurating area is packed with iodoform gauze as well as simply drained, the position should be maintained for the first twenty-four hours, and for another twenty-four after the removal of the gauze, in case in its removal some of the protective adhesions may have been broken down. In cases of greatly diffused suppuration in the abdomen it may be desirable to maintain the sloping position for several days. We must judge by the condition present in each case. If we think that pus still reaches the drainage tube from distant parts of the abdomen, that peritoneal adhesions have not stopped this process of drainage, then it is best to continue the position. The great difficulty is to tell when such adhesions have formed in any given case. Of course pus may still flow freely from a drainage tube above the pelves but come entirely from the pelvis and not at all from the upper abdomen.

After the removal of abdominal tumours in which much oozing of blood or serum is expected, either from extensive separation of adhesions, or from extravasation of some fluid contents of the tumour of an irritating character drainage is advisable. If the separation of adhesions, or the extravasation of cyst contents, have been confined to the pelvis, there is no need for the sloping position after operation, but if the oozing is expected from the whole abdominal cavity, then it is advisable, in addition to periodic suction through the drainage tube.

I have spoken of the length of time the sloping position should be maintained. When should you commence it? All cases of acute appendicitis should be placed in this position immediately the diagnosis is made, and operated on in this position, for it reduces the risk of extravasation of pus into the general peritoneal cavity before and during operation. And the patient should remain in this position from the time of the operation. But if shock is present at or after the operation, until it is recovered from it would be unwise to have the shoulders raised. There is no position like the Trendelenburg position for

* Since writing the above I have had a wooden inclined plane made to put under the bent knees and fixed to the head of the bed on each side by an adjustable cord. This is covered with a pillow, and can of course be easily removed when required and adjusted at any level in the bed. It is a simpler and more satisfactory arrangement than the sling. I do not think it is a good plan to tilt up the lower end of the bed to prevent the patient sinking down on it, for if they slip off their pillows or bed-rest they then are not even flat but slope the wrong way.

combating shock. If a patient is in a condition of shock I only gradually get him into the sloping position as the pulse improves, and I do not find that this leads to relapse of the shock, though perhaps, theoretically, it ought to do so. The use of the Trendelenburg position in shock, after abdominal operations, is a matter sometimes very difficult to decide. On the one hand we believe it will diminish the shock, on the other hand we may diffuse pus only present in the lower abdomen into the upper, and that is a very serious thing indeed. It seems to me that if we have evacuated the pus present in the lower abdomen and filled the suppurating cavity with gauze, we need not fear to use the Trendelenburg position, but if it is a case of purulent peritonitis, involving the lower half of the abdomen, with pus here and there amongst the coils, even if we have sponged out, it would be better to use the Trendelenburg position only as a last resort when all other methods of combating shock have failed.

After gastro-jejunostomy, persisting vomiting, which may be regurgitant, is sometimes successfully treated by raising the chest and upper abdomen, and keeping the patient on the right side. This position will favour the passage of jejunal contents past the stomach opening.

It seems to be the practice of some surgeons to keep a patient rigidly on his back after an abdominal operation, with his shoulders almost flat. This, I think, is an unnecessary and very trying restriction. He certainly must not contract his sewn-up abdominal muscles—that is, he must not raise his shoulders in bed even to the extent of a few inches, nor turn on either side. But if you can only get him to lie like a log and be rolled on one or other side, or have his shoulders raised and supported on pillows, I see no objection to that. The important thing is that the patient must lie entirely passive. There is not the same temptation for the patient to help in the turning on the side as in the raising of his shoulders. He must be told that unless he is found to lie as a dead weight the attempt to make him more comfortable in this way will have to be abandoned. A very useful way of raising the patient's shoulders is to have a sling of cloth passed under, and then traction made on this; this will impress on the patient the idea that it is to be an entirely passive business so far as he is concerned.

If, when you are lying flat on your back, with only a pillow or two under your head, you put your hand on your anterior abdominal wall, you will find that the very slightest attempt to raise the shoulders causes the muscles of the abdominal wall to contract vigorously. Now, even though a patient after an abdominal operation may not sit up in bed, yet every time he lifts his shoulders a few inches (it seems like raising his head) to drink, or, still more, to do anything with materials placed in front of him, or even to look around the room, he vigorously calls his anterior abdominal muscles into play, and these are the very muscles stitched together. It is better, then, to raise his shoulders well on pillows or a bed-rest in the daytime, so that he may not be tempted to do so by his own exertions, and to commence this directly the tendency to anaesthetic vomiting is over. If the abdominal incision is median it does not matter (that is, so far as strain on the abdominal wall is affected) which side the patient is turned on. In appendicitis operations it would be best for him to lie on the right side. When you lie on the right side and raise your shoulders, the muscles on the left side of the abdomen contract much more vigorously than on your right. Therefore, if the patient should raise his shoulders he will do less harm in this position than if lying on his back, and most harm if lying on his left side. This advantage in lying on the right side coincides with the advantage of this position for drainage.

I do not agree with one recent writer who says children may be allowed to move about freely in bed after an abdominal operation. They may certainly move their limbs freely, or be turned on the side, but it may be needful to fasten their shoulders down by means of a cloth passed over the chest (with holes for the arms to protrude through), fastened to the bed on both sides. With regard to raising their shoulders, I should say if it is clear they will try and move themselves when it is done, it must be abandoned, and that in young children it will seldom be possible.

I think the surgeon should himself superintend the first

raising of the patient's shoulders, and make sure he thoroughly understands he is to be quite passive, and that the nurses have thoroughly grasped the importance of this. If the shoulders are raised by the drawing up of the upright part of a bed-rest, he is more likely to remain passive than if his actual shoulders are raised and more pillows pushed under them.

Although I advocate thus changing the position of the patient quite early after operation, I think it very important he should not turn himself or raise his shoulders until the time he is allowed out of bed, for the latter movement at any rate is just the one to interfere with healing, or to stretch the weak scar.

THE TREATMENT OF FLATULENT DISTENSION.

The other subject in connexion with the post-operative treatment of abdominal cases, about which I should like to say something this evening, is flatulent distension of the intestines. If it becomes very marked, it is usually associated with vomiting, and the condition of the patient may become a very serious one. It is not possible to say in every case exactly what it is due to. It is often called paralytic distension. Sir Frederick Treves in the last edition of his book on intestinal obstruction suggests that this post-operative distension is really due to peritonitis, even though patients frequently recover from it. He suggests that surgeons do not like to admit that their patients have peritonitis after operation, and as a salve to their surgical consciences, call it intestinal paralysis, or ileus paralyticus. Other writers, however, maintain that they have examined, *post-mortem*, cases in which great distension and vomiting have been present, not due to mechanical obstruction, and have not found signs of peritonitis. They do not, however, always tell us whether they examined carefully for thrombosis of the mesenteric vessels, which is a well recognized cause of great tympanitic distension.

Mr. Lawson Tait used to call all such cases, if severe, peritonitis, and was one of the first to suggest the treatment of peritonitis by purgatives. Mr. Greig Smith, in his last edition of his book on *Abdominal Surgery*, maintained that it was impossible to tell in many cases whether the symptoms were due to primary paralysis of the gut, or to peritonitis, but that the treatment should be the same in either case. A persistent temperature, or marked tenderness, or rigidity of the abdomen would certainly be suggestive of peritonitis; on the other hand, the absence of these signs would by no means exclude peritonitis. I have had to operate on a case of intestinal obstruction due to adhesions, two years after I had performed ovariectomy for a cyst with a twisted pedicle. At the first operation I found only a few soft adhesions to the omentum. There was only slight flatulent distension on the second day, at once removed by a turpentine enema, and she was slightly sick on the fifth day, but with a pulse of only 84. Yet when I came to reopen her abdomen two years later I found extensive adhesions, so that a considerable amount of plastic peritonitis must have been present without any serious symptoms soon after the first operation. This condition some surgeons seem to consider common after abdominal operations, and they hardly call it "peritonitis," or if "peritonitis," then "traumatic peritonitis," to distinguish it from peritonitis due to the introduction of micro-organisms. Whether it is really common it is difficult to say; we seldom see the inside of the abdomen a few days after the operation.

We must remember that we may open the abdomen of a patient suffering from septic peritonitis, spreading widely in the lower abdomen, from appendix disease, and yet the pulse may have been well under 100 and vomiting absent. And surgeons have from time to time called attention to the latency of symptoms in post-operative peritonitis, even of a fatal septic type, and have pointed out that only marked frequency and feebleness of pulse, with an anxious, drawn look on the patient's face, and perhaps some tympanitic distension, may be present. Certainly pain, tenderness, and vomiting may be absent.

I am therefore inclined to think that more often than is generally supposed peritonitis is present in these cases of marked flatulent distension and vomiting, occurring after some abdominal operations in which no peritonitis exists prior to operation, though that peritonitis may be

plastic and not suppurative; and that in cases of diffused septic peritonitis in which great distension and frequent vomiting set in a day or two after operation, but which eventually recover, there is possibly an increase of the peritonitis for a time. But it would be a great mistake to suppose that such symptoms coming on soon after an abdominal operation indicate a fatal termination.

I have already referred to the fact that some surgeons have recorded *post-mortem* observations on some of these cases of flatulent distension and have found no peritonitis, but have regarded the condition as one of primary paralytic distension. In operations on the gall bladder and bile ducts, usually the only parts manipulated, or even seen, are the pylorus, duodenum, and hepatic flexure of the colon, and yet I have seen several times most marked distension of coils in the whole abdomen after these operations. It is true such distension has not been associated with vomiting, or other bad symptoms, but yet it was very marked, and could not have been due to peritonitis, from manipulation of the affected coils or from contamination of the general cavity by septic fluids, nor could it have been due to thrombosis of the mesenteric vessels, as the distension was soon removed by enemata. It is an interesting question as to the nature of this distension when no peritonitis is present. The fact that it may result from traumatism in only one corner of the abdomen, would suggest that it may be a reflex nervous condition, very likely a primary paralytic condition, but not necessarily due to handling of the actual coils which are paralysed. But given excessive gas production within the bowel, the over-distension, and the kinking it will produce, may cause a secondary paresis and an actual obstruction. It is, however, unlikely that the gas production in a distant bowel would be affected by a cholecystotomy, and it is much more likely a primary reflex paresis of bowel, and is probably so in some other cases, in which there is more general manipulation of abdominal viscera. But whatever the cause of flatulent distension and vomiting may be after an abdominal operation, the treatment is the same: you must get expulsion of gas per anum, and faecal contents, too, if you can. I believe that there is nothing like very hot turpentine enemata for this purpose, repeated every few hours, and given with a soft rubber tube, left in the rectum for a short time after, to allow any gas which reaches the rectum to readily escape through the sphincter. No doubt purgatives may be of value, but I would much sooner rely on hot turpentine enemata. They should be as hot as the moment they are given as the nurse can bear her hand in, and the turpentine should be most thoroughly made into an emulsion with soap and a pint of hot water, and, if one pint fails, two or three pints very slowly introduced by a funnel and small rubber tube, with the pelvis elevated, may succeed. We may give a few grains of calomel, followed by a Seidlitz powder, as well, and repeat it. There is no doubt that in many cases in which tympanitic distension is marked and vomiting frequent, and the patient seems really very ill, this line of treatment will, if persisted in, remove the alarming symptoms. Possibly the frequent hypodermic injection of strychnine may help somewhat. Morphine must be avoided. Pain is not usually a marked feature in this condition; and morphine will tend to paralyse the bowel. And it is no use putting nourishment, even though it is liquid and peptonized, into the patient's stomach in such cases. We must so arrange the time of the hot turpentine enemata that nutrients can be retained for some hours.

Suppose the condition does not improve with this treatment, what is to be done? We must remember that in rare cases true mechanical obstruction may follow abdominal operations from causes which time will not allow me now to describe, and a faecal condition of the vomit would strongly suggest the presence of this condition, though I have seen faecal vomiting in septic peritonitis. The vomiting and distension of mechanical obstruction does not usually set in for some days after the operation, whereas in paralytic distension and peritonitis it starts about the second day or earlier. It would be well to reopen the abdomen if symptoms of obstruction persist in spite of treatment, and to deal with any mechanical cause of obstruction, or open the bowel above it, and in

cases in which we suspect the presence of a diffuse suppurative peritonitis, and have not drained the abdomen, the opening up of the cavity and insertion of one or more drains may lead to recovery, especially if combined with suitable position and subcutaneous saline injection, in large quantity. It is absolutely useless to open any given coil of distended small intestine for paralytic distension, whether primary or due to peritonitis; you cannot in that way evacuate the distended, kinked, and paralysed coils above it. You can reopen the abdomen and empty with your fingers coil after coil, but you run great risk of hastening the end from shock. Whether it is right to take this risk, in these almost hopeless cases, is often no easy matter to decide.

THE DISSEMINATION OF INTRA-ABDOMINAL MALIGNANT DISEASE BY MEANS OF THE LYMPHATICS AND THORACIC DUCT.

BY

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PRELIMINARY REMARKS.

In April, 1905, I published in the *BRITISH MEDICAL JOURNAL* an interesting case of cancer of the thoracic duct and of the left supraclavicular glands secondary to latent carcinoma of the stomach. In January, 1906, I read before the Cardiff Medical Society a paper entitled, *The Respective Roles Played by the Blood Vessels and the Lymphatic Vessels in the Local and General Dissemination of Intra-abdominal Malignant Disease*. My present paper is based upon the two above-mentioned contributions, together with several cases which have since come under my personal observation.

It is well known that the lymphatic glands above the left clavicle (rarely those above the right clavicle) are occasionally involved secondary to malignant disease within the abdomen (stomach, intestine, rectum, pancreas, uterus), and it is also recognized that such enlargement may be the first, or, indeed, for a time the only, evidence of serious disease; and, moreover, that the primary mischief is often "latent," especially when it affects the stomach, since the supraclavicular glandular enlargement is most frequent when the growth is in the body of that organ. It has been computed that these glands are diseased in about 5 per cent. of the cases of cancer of the stomach, but this estimate is probably considerably below the mark. I make this statement for the following reasons:

(1) During the last fifteen months I have had under my own care five cases, and my colleague, Mr. William Sheen, has shown me two other cases, notes on which I am, by his courtesy, enabled to publish. (2) In some cases, although there may be no palpable enlargement of these glands, nevertheless careful percussion over or just below the left clavicle may demonstrate their presence. (3) In many cases there can be no doubt that the glandular enlargement is overlooked or referred to some other cause. (4) Careful necropsies, in cases of intra-abdominal malignant disease, may discover unsuspected glandular affection in this region.

The great rarity, in cases of abdominal cancer, of glandular enlargement above the right clavicle and its not uncommon occurrence on the left side, at once suggests that the infection is conveyed upwards by the thoracic duct, as there is practically no other channel of communication. The thoracic duct may act as a simple carrier of infection or it may be directly involved in the malignant disease, and the latter condition is undoubtedly more frequent than is generally supposed, and it should not be taken for granted that this duct is not involved, unless careful microscopical observations are made; for in three cases recorded below in which an autopsy was obtained, there was found in all of them, by my colleague Dr. Schölbberg, growth in the duct itself.

It is very remarkable to note to what a degree the thoracic duct is neglected in all medical and pathological

* It has been urged by some surgical writers that if we suspect primary paralytic distension, electricity should be tried before opening the abdomen.