intention of doing little more than relieving the patient by a tapping, but I presume that the first man who put a kettle on the fire had no intention of evolving a steam-engine from the simple process of boiling water; yet the discovery of how to boil water was by far the most important of all the phases through which the invention of the steam-engine has passed. There can be no question from Houstoun's description that he had diagnosed a dropsy of the ovary and that he had to deal with a condition which is often one of the most difficult that can be met with in the performance of ovariotomy, and he completed his operation by removing the cyst. Although he does not describe his division of the pedicle, or his having tied it, it is almost certain that he did both. He certainly must have seen and divided the pedicle, for he describes the disease as being of the left ovary, therefore he saw the pedicle. Perhaps he tore it and it did not need tying. That he performed a complete ovariotomy is certain, from his having noticed secondary cysts as well as from the recovery of his patient and the fact that she lived for thirteen years afterward, in perfect health.

William Hunter and his brother John Hunter must have known of Houstoun's case, for they were born and brought up in the district in which it occurred, and William Hunter lived for years in the city near which it was performed. They both advocated the theory of the performance of the operation, and John Hunter is reported to have said: "I cannot see any reason why, when the disease can be ascertained in an early stage, we should not make an opening into the abdomen and extract the cyst. Why should not a woman suffer spaying as other animals do? The merely making an opening into the abdomen would never be followed by death in consequence of it?"

Their friend John Bell, who practised in Edinburgh from 1790 till 1816, also pronounced in favor of its performance, but he is not known to have done anything toward trying it himself, and it is to a young Scotchman,[1] who was a pupil of John Bell's in 1793, that we owe the revival of the operation and its performance upon a scale which amounted to that of a legitimate experiment. Ephraim McDowell has been honored by the medical profession in America as the "Father of Ovariotomy," and whether we admit the accuracy of the title or not, there can be no doubt that it was in the backwoods of Kentucky that abdominal surgery received one of its greatest impulses. In 1809 the

[1] My American readers may object that McDowell was not born in Scotland. Of this, however, we are not yet clear. At any rate, his father and mother were Scotch, and at the time of his birth, 1771, the States did not exist.

second ovariotomy was performed successfully and the patient survived it thirty-two years. In 1817 Dr. McDowell published an account of these and of two other cases he had performed, and, as might be expected, his statements were received with general incredulity. The editor of the *British and Foreign Medical and Chirurgical Review* was bold enough to distinctly deny the credibility of McDowell's statements, but in 1827, when the authenticity of the accounts had been established beyond doubt, he had the manliness to "beg pardon of God and of Dr. McDowell of Danville" for his hardiness. The operation was performed twelve times in all by Dr. McDowell, with a mortality of thirty-three per cent., and in one other case he failed to complete the operation.

Lizars tells us that about 1816 Dr. McDowell sent his manuscript to John Bell, at Edinburgh, for his perusal. At that time the great surgeon had gone to Rome, suffering from his fatal illness, and the manuscript was read by John Lizars, who was doing John Bell's work. This accounts for Lizars being the first to follow in Houstoun's footsteps in Scotland, and it affords a curiously sequent history of the early phases of this notable surgical success.

In 1822, Nathan Smith, of New Haven, performed an operation successfully, and in 1823 Lizars made his first attempt, but unfortunately he had made a mistake and there was no tumor. Nathan Smith's case was undoubtedly one of parovarian cyst, and the operation was therefore not an ovariotomy at all. It is notable, however, for the facts that he used the short incision and the short ligature. The curious fact that so many of these early successful cases were parovarian tumors makes me believe that a great many more true ovariotomies were done, of which there are no records, for they probably all died. Parovarian cysts now are removed without any risk at all. I have never lost a single case. It is therefore very likely that they formed the early successes. On February 27, 1825, Mr. Lizars removed an ovarian tumor successfully, using the long ligature. On March 22d of the same year he removed another, using the short ligature, but his patient died. In his fourth case he could not remove the tumor, but the patient recovered from the incomplete operation. He concludes his account of these cases with the remarkable sentence: "From these cases, it appears that there is little danger to apprehend in laying open the abdominal cavity; and that in diseased ovarium, extra-uterine conceptions, *fœtus in utero*, with deformity of the pelvis preventing embryulcia, aneurism of the common or internal iliac arteries, or of the aorta, volvulus, internal hernia, and foreign bodies in the

stomach threatening death, we should have recourse early to gastrotomy. The delay in such cases is more dangerous than the operation." It has taken fifty years to establish the justice of this opinion.

Dr. Granville, of London, operated twice in 1827, and it is generally stated that both of his cases were unsuccessful, but in a volume of notes made by the late Dr. T. H. Tanner, now in my possession, and written in his own remarkably neat writing, I have found a note to the effect that one of Dr. Granville's cases, performed March 21, 1827, was successful, but I do not know upon what authority this note is made.

For some ten or twelve years after the death of McDowell, and after the failures of Lizars, ovariotomy seems by common consent to have been discontinued. In March, 1836, Dr. Jeaffreson, of Framlingham, removed a parovarian tumor successfully through an incision only an inch and a half long ("Transactions Provincial Medical Association, 1837"), and it is an interesting fact that Mr. R. C. King, of Saxmundham, assisted at this operation, for he shortly afterward described two cases of successful removal of similar tumors. In 1838, Mr. Crisp, of Harleston, and Mr. West, of Tunbridge (*Lancet*, 1837–8), also had successful cases, but they were clearly all parovarian, and not ovarian tumors. On November 6, 1842, Mr. D. Henry Walne performed three operations, all of which were successful, and published them as ovariotomies; but, singularly enough, in not one of these cases was the tumor removed an ovarian cystoma. Mr. Walne gives a figure of the first of his cases, and he so thoroughly describes the appearances of the other two that no doubt can exist that they were parovarian cysts, and it is not clear whether he did or did not remove the ovaries with them. On October 19, 1843, he removed a tumor which was undoubtedly of ovarian origin, but unfortunately the patient died. His method of operating was very curious, and to us now would seem very ghastly, but still he deserves the credit of a pioneer. He tells us his incisions were fourteen or fifteen inches long, and that they were extended bit by bit until the tumor slipped out of them; that is to say, a parovarian cyst, which might have been removed by a two-inch incision after being tapped, was allowed to deliver itself, with its wall unbroken, through an incision which was made large enough to accommodate it.

On September 27, 1842, Dr. Charles Clay, of Manchester, who may in all truth be regarded as the "Father of Ovariotomy" as far as Europe is concerned, performed his first operation for the removal of a diseased ovary. He had, on the twelfth of the same month, performed another operation, but here again there is

abundant evidence to show that a parovarian was mistaken for an ovarian tumor. Previous to September, 1842, we have therefore records of only two ovariotomies, properly so called, in this country, those of Houstoun and Lizars.

In 1843, Mr. Aston Key removed both ovaries, and Mr. Bransby Cooper also tried the operation in that year, but it was not till 1844 that there was a successful case in London, operated on by Dr. Frederick Bird, followed by one in the practice of Mr. Lane. In the provinces, however, many successful cases had been done, and the metropolis was, not for the only time, behindhand. Dr. Clay continued to operate with very remarkable success for many years until he had performed three hundred and ninety-five operations with one hundred and one deaths, his total mortality being therefore about twenty-five per cent. His operations were witnessed and alluded to by some of the most distinguished practitioners of the time, and yet Clay has received an amount of adverse criticism, and his statements have been received with an incredulity which is as undeserved as it is unworthy of those from whom it came, and which arose solely from the fact of his being a provincial surgeon. Looking back upon the work of a generation now almost passed, from a standpoint altogether free from personal bias, I have no hesitation whatever in ascribing to Dr. Clay by far the larger share of the credit which arises from the enormous advances made in abdominal surgery during the last forty years. It is quite true that McDowell was the first to do a number of ovariotomies, and it is equally true that Houstoun was the first successfully to remove a diseased ovary, but it was Clay, of Manchester, who first showed that ovariotomy could be made an operation more justifiable by its results than any of the major operations of surgery. His methods were imperfect, as are the methods of all pioneers, but it was upon his work that the foundation was laid for all those brilliant results we now attain. I say this with all the more readiness now that Dr. Clay is far advanced in life, and that but lately a most unfair and ungenerous attempt has been made to deprive him of his just merit, though perhaps I might have left it unsaid, as Dr. Clay has shown himself quite capable of his own defence. In Sir J. Y. Simpson's Lectures, published in the *Medical Times and Gazette*, 1859–61, there is the following evidence on behalf of Dr. Clay: "Indeed, the revival of it is principally due to the exertions and example of Dr. Clay, of Manchester, who has himself operated now in ninety-three cases." Bryant, in his book on "Ovariotomy" (1867), entitles Dr. Clay "the first great apostle of ovariotomy in this country." Peaslee remarks in his work on "Ovarian Tumors," "to him, more than to all other

operators the credit belongs of having placed the operations of ovariotomy, on a sure foundation."

One of the most conspicuous defects of his method of proceeding was the employment of what is called the long ligature—that is to say, he tied the pedicle, returned it into the abdomen, and left the ligatures hanging out of the wound, as was done by McDowell and Walne. Had he cut these ligatures short, and completely closed the wound, I have no doubt that instead of having a mortality of twenty-five per cent. it would speedily have fallen to six or eight per cent.

The great improvement which was effected upon Clay's method was that which, curiously enough, had been employed twenty years before by Nathan Smith, but which was neglected until reintroduced and firmly established by the late Mr. Baker Brown, and to this most able but most unfortunate surgeon I unhesitatingly award the position of having achieved the second great advance in abdominal surgery. He began to operate in 1851, and his career ended in 1867. He established the short incision, the intraperitoneal method of dealing with the pedicle, the use of the actual cautery for its treatment, and the complete closure of the abdominal wound. Between May, 1865, and September, 1867 (that is, during the time when he employed the cautery), he performed forty operations upon these principles, with four deaths, or a mortality of ten per cent. During the same period Mr. Spencer Wells operated one hundred and one times with twenty-six deaths; or a mortality slightly over twenty-five per cent. Verily ovariotomy would have had a very different history during the last fourteen years if Mr. Baker Brown had not fallen a victim to his own folly, or professional jealousy—for opinions differ very much as to the cause of his death. His methods, again, were in many respects faulty, and have since been immensely improved upon; but I give these details concerning the result of his practice because here again a most unfair attempt has been made to deprive a man of the credit he has deserved; and however much Mr. Baker Brown's actions in other respects are to be deplored, and however much he may or may not have deserved his sudden and disastrous downfall, he does deserve to rank second in order of English ovariotomists.

The following letter from Dr. T. Keith (*British Medical Journal*, July 31, 1880) gives very important evidence upon this point in the history of ovariotomy:

"Simple experience with the clamp alone did little to diminish this mortality; for, in Mr. Wells' published eight hundred cases, the death-rate in the last three hundred was greater than in the preceding three hundred. His results by the dropped ligature were even worse—thirty-eight per cent. All over the frightful mortality of one in four continued!

"For some time past it has seemed to me that, had Baker Brown lived, the history of this operation since 1864 would have been different. His own method of dealing with the pedicle by the cautery at once lowered the mortality to one-half of that with the clamp, and it was becoming practised in London when illness came to him, and death. The man and his method were quickly forgotten; no one would have the lesson his work gave. All were strangely blind in those days to its value. Should I not rather say, we were all strongly prejudiced? In truth, there is no more startling page in surgical history than that in which his latest results are given. On one page we have almost nothing but failures; on the other, by a simple change in the method of operating, an almost uninterrupted line of success. During the whole of his professional life he seems to have tried hard to cure ovarian disease. From 1851 to 1864 he made many efforts and tried many ways, all in vain, till he adopted the cautery. His published results show a mortality of less than one in ten in completed cases. I have read somewhere that he lost but four of his last fifty operations. Some years afterward—unable to get my mortality much under the one in five, for I was then ignorant of drainage—I took to Mr. Brown's method in a sort of despair. For a time it was used irregularly, and only in the worst cases, or in those not favorable for the clamp. The results of the first fifty cautery cases, published in the *Lancet*, gave a mortality of less than one in twelve—eight per cent., and the results that followed were much better. Mr. Wells and Mr. Thornton have lately given their statistics of cases performed under careful antiseptic treatment, and with all the other improvements of these later years, and the mortality *is nearly eleven per cent.*

"So much for Mr. Baker Brown's as compared with the other methods. But, after all, what concerns us most now is, by whose method may ovariotomy be performed with the least risk to the patient? Surely the one that gave us a death-rate of less than eight per cent., long before antiseptics were heard of, is the one to trust to now—such, at least, is my experience. The cautery alone gave the best results of all the methods before. It gave better results fifteen years ago than any other method can yet show with antiseptics. Helped by drainage—for where would the antiseptic system be without drainage?—it gives the best of all results with them. Ninety-eight of my last hundred cautery operations have recovered, and in one of the two fatal cases the tumor was malignant with cancerous matter in the pelvis, practically an incomplete operation.

"Have I not reason, therefore, for saying that, had Mr. Baker Brown lived, the history of ovariotomy since 1864 would have been changed; and that, in making his calculations, Lord Selbourne would have had to add three times the number of years to the lives of women saved by ovariotomy?"

In 1858 Mr. Spencer Wells began his work, and in his third operation he adopted the clamp as a method of dealing with the pedicle, and this he retained in all suitable cases until about 1878. During this time he performed 627 operations with the clamp, having a mortality of 20.73 per cent. During the same period he operated 157 times with the ligature, with a mortality of 38.2 per cent., and on this point it is to be noted that he retained the intraperitoneal method only for those cases to which he could not apply the clamp. I mention this here merely to indicate my opinion that the introduction of the clamp was a decidedly retrograde step in the history of ovariotomy. When I began my own practice, in 1867, I employed the écraseur, a variety of the intraperitoneal method, and my results over a limited experience were extremely good. Like others, however, I was so impressed with the overwhelming experience of Mr. Wells, that I resorted to the clamp, and my results with it were so bad that its employment will ever be to me a matter for bitter and lasting regret.

In his lectures before the College of Surgeons Mr. Wells gives the following account of his results:

"With regard to the proportion of deaths to recoveries, taking my own cases only as a starting-point, of the 500 cases published in my book, 373 recovered and 127 died—a mortality of 25.4 per cent of the 300 subsequent cases, published in 1873, in the paper at the Royal Medical and Chirurgical Society, 223 recovered and 77 died—a mortality of 25.6 per cent. Since the 800 cases, I have now operated on exactly 100 more, making a total of 900 complete operations. Of the last 100, 83 recovered and 17 died—a mortality of 17 per cent. Adding the whole 900 cases together we have 679 recoveries and 221 deaths—a mortality of 24.5 per cent. It is satisfactory that in the last series of 100 cases the mortality is the least."

In the last hundred cases I believe some seventy-five or eighty were dealt with by the ligature, and nothing could be more condemnatory of the clamp than such figures, which show that after using it more than six hundred times in selected cases, Mr. Wells could not bring his mortality below twenty per cent., whereas, fourteen years before, Mr. Baker Brown had a mortality of only ten per cent. with the intraperitoneal method.

In 1862, Dr. Thomas Keith began his operations in Edinburgh, and he speedily found, as he tells us, that the results obtained

by the clamp were extremely bad, and he reintroduced, and by his brilliant work has completely re-established, the intraperitoneal method of Baker Brown. With the clamp his mortality was 19.2 per cent., which is close upon that of Mr. Wells, 20.73; with the cautery, on the other hand, out of 156 cases Dr. Keith has had a total mortality of only 3.85 per cent., and in addition to this it can be shown by his constantly diminishing mortality that with each series of operations his increased skill diminished his death-rate, so that in his fifth series of fifty cases he had a mortality of only eight per cent. No such progressive improvement is seen in Mr. Wells' 627 cases of clamp treatment.

Just as this is written I have completed a series of a hundred cases performed without any of Mr. Lister's so-called antiseptic processes, and in all of which the pedicle was treated by the "Staffordshire knot." Only two of these hundred cases have proved fatal, and in both cases death was due to the fact that they had been repeatedly tapped.

Dr. Keith (*British Medical Journal*, October 19, 1878) attributes his success to four conditions, of which he speaks as follows:

"1. To drainage of the abdominal cavity in severe cases by a large perforated glass tube going to the bottom of the pelvis. It is to Koeberlé that I am indebted for the idea. He kindly gave me two of his small tubes in 1866. These were soon found to be too narrow and too short. They got easily choked with clot or lymph. For the last ten years, I have used the large glass tubes now in common use. Till I had learned in what cases to drain, the tube was used in alternate cases of the severe operations. I am as certain as I am of my existence, that had I used them earlier and oftener the mortality would have been less by one-third. These tubes I supplied to ovariotomist friends in all parts of the world, though no one used them, so far as I know, till attention was called to drainage by the vagina by Dr. Marion Sims—a method which seems to me to be one calculated rather to give rise to blood-poisoning than to save the patient from it. It is remarkable that the only year in which the mortality of the Samaritan Hospital fell to 10 per cent. was in 1876, when drainage by these glass tubes was first generally used. 2. To the use of the cautery in dividing the pedicle, as proposed and practised by the late Mr. Baker Brown. How the lesson given by his last results has been so systematically ignored in London has always been a marvel to me. 3. To the employment of Koeberlé's compression forceps, in large numbers, whereby loss of blood is prevented. His model is still the best, notwithstanding the clumsy imitations of it lately invented. 4. To the substitution of ether for chloroform in my last two hundred and thirty operations,

whereby the after-vomiting is avoided, and the risk of hemorrhage when the wound is closed diminished. All these things have, I think, helped to lessen the mortality, but the drainage and the employment of the cautery in the division of the pedicle have contributed most."

"I wish, for the credit of my small hospital, which I carried on almost entirely at my own expense, to make this statement of results distinctly; and I would not make it prominent now, but that year after year the authorities of the Samaritan Hospital proclaim in their reports, in the largest of Roman letters—though one of the surgeons tells me that he has objected to the statement in vain—that the results got there are always the best that have yet been obtained, the mortality of the Samaritan Hospital down to the end of 1876 being nearly one death in every four operated on; of the last five corresponding years, one in five."

At this period the history of ovariotomy entered upon a new phase by the introduction and application of what is called the antiseptic theory and the Listerian method of putting this theory in practice. Keith's results without this method were so brilliant as to put all other efforts in the shade, and, startled by them, with one consent we followed in his footsteps. In my own practice the mortality fell from twenty-five per cent., which seems to be the normal rate following the use of the clamp, to seven or eight per cent., which seems about the rate possible when Baker Brown's practice is followed. An attempt was made by Mr. Spencer Wells and his assistant, Mr. Thornton, to cover their retreat from the use of the clamp by claiming for the Listerian method the merit of the reduced mortality; but in the proper place I shall give reasons which have fully convinced me that it is to Mr. Baker Brown and to Dr. Keith, but certainly not to Mr. Lister, that we owe our recent and most brilliant results in this department of surgery.

In the preface to Mr. Wells' first book on "Diseases of the Ovaries," and again in his second edition in 1878, there is the following sentence. "Dr. Clay had steadily continued in the career which he began in 1842, but his operations not being performed in a hospital, before numerous professional witnesses, and no connected series of his cases being published, his example had but little influence."

These words are again used in an anonymous article upon the history of ovariotomy in the *British Medical Journal* for July 17, 1880, and I think they give a very unfair representation of the value of Dr. Clay's work. They convey the impression, whether intended or not, that the writer considers Dr. Clay's

statements concerning his cases are not to be trusted, but for my own part I am perfectly satisfied that there is not the slightest reason for any such aspersion. It is quite true that Dr. Clay's cases were performed in private practice, but if this is to be a ground for suspicion of their authenticity, then at least half of the contributions made to medical literature may be equally doubted. We might just as well turn round and doubt the cases which are credited to Dr. Ephraim McDowell; and the statement made by Mr. Wells that Dr. Clay did not publish any "connected series" is not correct, for he not only published a pamphlet, from which I have quoted, and of which I possess a copy, but in 1857 he published a table in which he gave the results of fifty-one operations. In his first twenty there was a mortality of forty per cent., in the second twenty about thirty per cent. mortality, while in the last thirty-one operations it fell to twenty-five per cent., and that mortality was maintained by Mr. Spencer Wells for twenty years after the publication of what I am now quoting from. Further, in Dr. Clay's publications and in the publications of others, it is made perfectly clear that he had performed his operations before "numerous professional witnesses."

There can be no doubt, therefore, that Dr. Clay's example emboldened others to follow in his footsteps, and to him must be given the first rank amongst English ovariotomists for the revival and complete establishment of this most important operation. It must be borne in mind that, at the time in which Dr. Clay practised, the exact method of recording cases, particularly of ovariotomies, which now obtains, had not been introduced in any department of practice, and even now it is almost confined to abdominal surgery. No one seems to have published any cases with the idea that at some later date a carping critic might rise to assert that such a case had never existed. This is a kind of argument which has received an almost universal condemnation amongst honorable men, and it is one which can only be made by insinuation, and its authors dare not give it by direct statement. To Mr. Spencer Wells must be given the credit of having introduced the exact statistical method, and this there can be no doubt had a very large influence in consolidating both professional and public opinion as to the propriety of performing such operations; for it was not till then was there any possible answer to such criticism as that directed against Dr. Clay. But that Dr. Clay did not provide against that kind of criticism, which he probably never expected, forms no justification for the conclusion that his statements concerning his operations and their results are not quite as correct as those of Mr. Wells or Dr. Keith.

What I have to say of the history of ovariotomy may be concluded by an expression of opinion that the record of its progress passes from Clay and Baker Brown to Keith, passing over altogether the unfortunate interregnum of the clamp as something deeply to be regretted. Not only by the re-establishment of the intra-peritoneal method, but by the successful teaching of the necessity for the complete cleansing of the peritoneum and the occasional use of the drainage-tube, Keith has earned the lasting gratitude of humanity.

The treatment of ovarian tumors by therapeutics need not be discussed, further than to say that it is limited to the administration of tonics to sustain the functions of the patient, or to correct some errant condition which might diminish the chances of success for the surgical treatment of the case. Sometimes we are the victims of singular coincidences, which seem to militate against the general experience in this matter. Some years ago I was consulted by a woman with an enormous unilocular tumor, whose husband declined all operative measures. Some months afterward she received from the hands of a physician some inert *placebo*, and soon afterward the cyst ruptured and its contents were absorbed. For nearly five years she remained perfectly well and then the tumor reappeared. She was admitted into a large general hospital, was operated upon and died in a few days. The tumor proved to be, as I had anticipated, a parovarian cyst.

For the cure of an ovarian cystoma there is nothing known to have the slightest influence save an operation for its removal, and those patients who unfortunately are led to believe that some drug or other, or some fanciful form of treatment will relieve them from the necessity of an operative ordeal, are only induced to waste time which is valuable, and to run risks which may be avoided. On this subject Mr. Spencer Wells observes: "But I would also say that if the operation be delayed for a time, she should not be subjected to any useless treatment: that it is quite useless to attempt, by iodine, or bromine, or lime, or by gold, or by any other remedy, to attempt to diminish the size of the tumor or to check its growth. All that is quite useless, and might be very injurious to the patient."

Sir James Y. Simpson expressed his experience in equally strong terms when he said, "he had no belief whatever that iodine, or mercury, or muriate of lime, or aqua potassæ, or diuretics, or deobstruents, or aught else, were capable of absorbing and removing the complicated structure and contents of a multilocular cystic tumor of the ovary." Mathews Duncan says, "We know of no one example of the cure, otherwise than

by the operation of Ephraim McDowell, of an ovarian dropsy properly so-called; not one, however many may be found described, or whoever may be the describer. Cures by one or more tappings, cures by medicines, cures by spontaneous rupture, cures by advancing pregnancy, have been, if not mere egregious mistakes, almost certainly cures of parovarian cysts whose history, as already known, quite accords with and explains such erroneous allegations."

Of tapping I have said as much as I think necessary, but here I may repeat what every one knows now, that it never cures a tumor, and that it only brings about complications. It is my firm belief that if ovarian and parovarian tumors were never tapped, but were removed early in their history, we should have only a casual mortality from the operation of ovariotomy. Tapping, therefore, in my practice, has become only a palliation for tumors I could not remove.

Many other plans have been devised for the radical cure of ovarian tumors, but they are now all abandoned in favor of ovariotomy; and such methods of treatment as the injection of iodine or the establishment of fistulous tracks can only be justified under very exceptional circumstances.

Before the reintroduction of the intra-peritoneal method by Dr. Keith, we used to delay the removal of an ovarian tumor as long as the patient could get about comfortably, and this was justified by the fact that with the clamp we got only about seventy-five per cent. of recoveries. But now that we can get ninety-five, and when we might get ninety-nine per cent. of recoveries if there were no delayed and tapped cases, my rule is to remove an ovarian tumor as soon as it is discovered, and this will soon come to be the received practice. The earlier the operation is performed the more certain the patient is to recover, for the less likely are there to be any complications. However advanced a case may be, I never refuse to operate, for I have seen some of the most unpromising cases recover without interruption. Even when there is strong reason to believe that the tumor may be complicated with malignancy, I make an exploratory incision to remove all doubt. In this way I find that my proportion of exploratory incisions is increasing, for whereas formerly I made an exploratory incision where I thought the tumor might be removed and where I proved mistaken, I now make an opening often where I believe the tumor cannot be removed, and here again, to my great delight, I am occasionally in error. An exploratory opening never does any harm, and very often does a great deal of good, even where the tumor cannot be removed, for I have repeatedly known that after this operation there was no reaccumulation