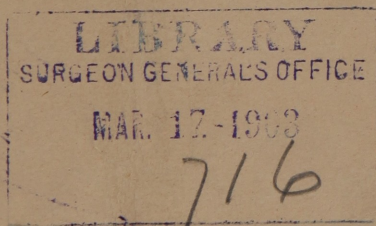


S. IRISH (J.C.)

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OF OVARIAN TUMORS.

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*Reprinted from the Boston Medical and Surgical Journal of  
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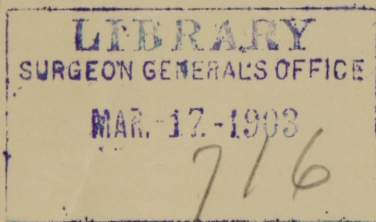
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## REASONS FOR THE EARLY REMOVAL OF OVARIAN TUMORS.

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WHILE the discussion of this subject may present very little that will not have already been carefully considered by ovariologists, still it may be of interest to those members of the profession who are occasionally confronted with this very grave question: to decide for their patient when in its progress an ovarian tumor should be removed. Some, too, may be led to consider whether the quite prevalent opinion that a patient should not be exposed to the dangers of ovariectomy before her health is enfeebled or her life imperiled may not be erroneous and unfortunate.

In reference to the time when ovariectomy should be advised, Professor Peaslee, in his *Treatise upon Ovarian Tumors and Ovariectomy*, laid down the following rule: "When the general health has become somewhat impaired, and not till then, the time for ovariectomy has arrived."

This precept of Dr. Peaslee, given in 1872, has since been, in the main, accepted by American writers upon ovariectomy. Drs. Thomas and Emmet, however, in their late publications, give this rule with much less emphasis than did Dr. Peaslee, and with some very important exceptions.

While this teaching has produced a very general impression among the profession at large that ovariectomy should not be undertaken until the patient's health is considerably deteriorated, yet among ovariologists at

the present time a different sentiment is fast gaining ground, many of them advising the operation while the patient is still in robust health. The wisdom of this course of action is already apparent in the rapidly increasing per cent. of success.

Spencer Wells in the edition of his work published in 1872 gave essentially the same rule in regard to the best time for ovariectomy as that just quoted from Dr. Peaslee. But in 1882 he says: "I have become more and more disposed to advise the removal of an ovarian tumor as soon as its nature and connections can be clearly ascertained and it is beginning in any way mentally or physically to do harm." Yet a glance at the last hundred cases in Mr. Wells's published table would persuade the reader that he really in practice followed the first clause of his rule rather than the second, for among this hundred there appear seventeen cases in which the tumor weighed ten pounds or less, one of them weighing only four pounds. Now it is very improbable that ovarian tumors of this size could be doing any appreciable harm, either mental or physical. It is more probable, rather, that they were removed as soon as their character could be clearly ascertained.

One great argument in favor of delay is, that after the tumor has become sufficiently large to distend and press for a time upon the peritonæum, it so changes the character of that membrane as to render it less liable to a severe grade of inflammation, and that the patient, therefore, is in less danger of death from peritonitis.

Referring again to Mr. Wells's last hundred reported ovariectomies, we find that not one of the hundred died of peritonitis, though there were eleven deaths, and in seventeen cases the weight of the tumor was only ten pounds or less.

In his series of one hundred cases from January 1, 1869, to January, 1871, there were ten deaths from peritonitis. The average weight of the tumors in these fatal cases of peritoneal inflammation was twenty-two

and one third pounds, while the average weight in the whole series was twenty-one and one third pounds.

Of about forty cases of ovariectomy that have come under my observation, but two died of peritonitis, and in both instances the tumors were large and had exerted considerable pressure upon the peritonæum.

So far as these histories teach anything, they show that the size of the tumor is not an important factor in determining a fatal result from peritonitis. They also indicate the recent rapid decrease in the frequency of this formidable sequel to ovariectomy, the series of fourteen years ago embracing ten deaths from this cause, while the later contains not one.

The experience of other ovariectomists in this regard, as I learn by inquiry and from their written statistics, coincides with that of Mr. Wells.

Peritonitis, therefore, has well nigh ceased to be a prominent cause of death after ovariectomy, although the operation as a rule is performed much earlier than ten years ago. There are several causes, I think, that have contributed to this favorable result. Important among them is the improved method of treating the pedicle, namely, by short ligatures and replacement within the abdominal cavity, a mode of treatment that has very generally been substituted for the clamp and long ligatures brought out at the lower angle of the wound. Another is the great care now exercised in preventing the entrance of any extraneous matter into the abdominal cavity, or if this has been unavoidable, its thorough removal, together with the great pains taken to render the condition of the peritonæum an aseptic one.

Another reason given for deferring the operation until the patient is debilitated by the disease is that thus a certain amount of comfortable life is secured to her which would have been lost in the event of a fatal issue. At a time when about one third of the whole number who submitted to the operation died this argument was a cogent one. But now, when not one in ten,

excluding the delayed and tapped cases, die, and when, in the near future, not one in twenty will die from the operation, this plea for delay loses its great force.

The dangers, too, that constantly increase and always menace a patient with an ovarian cystoma, are so great as to far outweigh all the advantage that any postponement of the operation can bring.

Although adhesions of the cyst wall to surrounding structures may form at any time during the growth of an ovarian tumor, yet in the majority of cases they do not occur before the cyst has become large enough to entirely fill the abdominal cavity, and are most common in those cases where the tumor has reached an age of two or more years. They are, therefore, complications that an early operation would generally avoid. While adhesions, however extensive they may be or however closely they may attach the cyst to the abdominal parietes, omentum, intestines, or brim of the pelvis, are not a contra-indication to ovariectomy, still they convert an operation that in itself is really a very simple one to one of great difficulty and hazard. I have seen three cases in which an attempted ovariectomy could not be completed on account of immediate adhesions to important viscera. In two of the three the disease had existed about three years, without much impairment of health, and without giving very great inconvenience. For this reason, in accordance with the rule we are discussing, they were advised to defer an operation until some more urgent necessity for it arose. The consequence was that they each, for three years, carried about with them an ugly, mortifying deformity, and then died of an affection of which they might have been cured three years before.

In passing from this well-worn topic of adhesions to the discussion of degenerative changes that take place, the following case is presented as an illustration of the former, and especially as an example of the insidious general poisoning that may follow degenerations of even the interior structure of an ovarian cystoma: —



Miss C. N., Rockville, Conn., aged nineteen ; operation September 19, 1879. The tumor was noticed one year before. Her general health had apparently been unimpaired until three months ago, when she began to lose flesh and strength. Latterly her failure in health had been rapid.

September 18th we found her with a pulse 110, a rapid respiration, and a hectic flush upon each cheek. No abnormality of the patient's lungs could be found, and her attending physician, Dr. Risley, as well as myself, was at a loss to account for her condition of hectic. All was explained, however, when the contents of the tumor were withdrawn. The liquid had the physical appearance of pus of considerable consistency, and in amount was about nine quarts. The tumor had evidently been a multilocular cyst whose division walls had become degenerated and broken down. Hence the blood-poisoning that would undoubtedly have ended the patient's life very soon had not removal been effected. The cyst was adherent to the parietal walls anteriorly and at each side. The pelvic and intestinal adhesions were also extensive. Many of them were firm fibrous bands, with blood-vessels of considerable size, while in several places the cyst was agglutinated to the intestinal surface. The separation of these adhesions was attended with many difficulties and occupied two and one half hours. The patient finally recovered after a very tedious convalescence, and is now in good health.

Tracing the natural history of an ovarian tumor through its entire course, it will be found to have caused death in one of two ways : either by its size interfering with the normal functions of the abdominal and thoracic organs or by degenerative changes that have occurred in its structure. But cases of the former class are rare, and especially so, because the great size is usually relieved by tapping when the tumor becomes oppressively large. Such a tumor that would have become fatal at last on account of its size alone now becomes so, if it has been tapped, by reason of

degenerative change. Practically, therefore, an ovarian cystoma, subjected to no surgical interference except tapping, produces death by structural degeneration of its tissues.

These parasitic growths, as Mr. Wells terms them, differ in their histological character from the normal tissues in which they take their origin, and the deviation becomes more and more marked as their development progresses. Like most other adventitious growths, their vitality is feeble and their tenure of life, as a rule, is short.

In any given case we cannot predict when this process of degeneration will begin, and oftentimes when it has advanced very far towards the decay and death of some tissue of the cystoma it gives no sign by which it can be recognized, and we then have a dead tissue in the living body, diffusing a subtle and deadly poison through the whole organism. In many instances the progress of this septicæmia towards a fatal result is rapid, in others slow, as in the case just described.

Again, our first warning of cystic degeneration may come from some accident; a not uncommon one being rupture of the cyst walls, and the escape of its contents into the abdominal cavity, producing a very fatal form of peritonitis.

The following case is an illustration of an accident more rare than cyst rupture, and due to degenerative change affecting the pedicle:—

Mrs. S., Lowell, age forty-five; operation June 19, 1881. She had always been in good health until October, 1880, when after a cessation of the menses for three months she noticed an enlargement of the abdomen. The patient regarded herself as pregnant, in which opinion she was confirmed by medical advice until June 12th, when a careful examination revealed unmistakably the presence of an ovarian tumor. It was at this time that the operation should have been performed, yet as her general health was seemingly unimpaired, the removal of the tumor was delayed. Two

days after Mrs. S. had a severe attack of pain localized in the right lumbar region.

The pain speedily subsided, but similar attacks followed at intervals of a day or two, and when they occurred the patient became pale and the extremities cold. Meanwhile the tumor very sensibly increased in size, and at the same time the patient's strength rapidly failed. The tumor was removed one week from the time of the first examination. When the cyst was tapped with a "Wells' trocar," a large quantity of clotted blood passed through the tube. Very soon when the withdrawal of liquid had removed all tension from the cyst walls, and as I was drawing the sac out through the incision, there appeared a stream of fresh blood through the tube. The clamp was at once applied to the pedicle and further hæmorrhage stopped. Its application required only a few seconds, still a large quantity of blood must have been lost.

The cause of the attacks of pain and the accompanying pallor, with coldness of the hands and feet, was now apparent. The internal portion of the pedicle had become broken down by degenerative changes, and one or more of the large blood-vessels had been opened, thus pouring blood into the sac from time to time as much as the distensibility of its walls would allow. It was from this cause that the tumor had increased so rapidly in size and the final great hæmorrhage, added to those preceding, had so exsanguinated the patient as to prove fatal just as the operation was being completed.

In June, 1881, at the request of her attending physician, I saw Mrs. M., of Milford, Mass. She had an ovarian cystoma of recent development that extended two or three inches above the umbilicus, but not distending markedly the abdominal walls. Her general health had, seemingly, been unaffected by the growth of the tumor. Therefore, in deference to the generally accepted rule of practice that ovariectomy should not be resorted to while the patient is in vigor-

ous health, the removal of the tumor was deferred. Some three months after the sac ruptured, and Mrs. M. died in seventy-two hours of peritonitis.

All the perils of ruptured cysts, bleeding pedicles, and septicæmias from broken-down and dying tissues of the tumor can be averted by an early operation.

And does not the avoidance of all these dangers far exceed in the welfare of the patient every possible advantage, if there be any, that can come to her by delay? In short, is not an early interference, while the tumor is both small and recent, the wisest and most prudent course?

Mr. Lawson Tait, in his work upon Diseases of the Ovaries,<sup>1</sup> presents a very strong argument in favor of the early removal of ovarian tumors, based upon their pathological character and manifest malignant tendency. After describing the great variety of epithelial cells found in cyst cavities, their mode of development, and their varied departures from the normal epithelial cell, he concludes that most ovarian tumors have, at least, an element of malignancy, and that their prompt removal is urgently demanded as a protection against the systemic infection of the patient with cancer.

These conclusions of Mr. Tait are corroborated by the after-history of Mr. Wells's one thousand cases. A large proportion of the whole number were living at the time of the report, yet of those who had died thirty-three had died of cancer, and if a complete history of all these cases could have been obtained this number would probably have been largely augmented. The fact that so many patients at one time in their life develop an ovarian tumor, at another cancer, or, as quite often occurs, a uterine fibroma, seems to indicate that these growths are simply different manifestations of one and the same abnormality of the general system.

In this connection the case of Mrs. J., of Connecticut, from whom an ovarian tumor was removed June

<sup>1</sup> Page 144 et seq.

12, 1879, is interesting. Age forty-five. No children. When she reached the age of thirty-nine her menstrual periods gradually became more frequent and the flow more profuse, until for the past six months there has been an almost continuous sanguineous discharge from the vagina. Last July, that is, eleven months before the operation, she noticed a tumor in the right iliac region, which was painless, but had steadily enlarged. June 5th I made the first examination. Her general health was not greatly impaired, and that mainly by the menorrhagia and metrorrhagia of the past year or two. The tumor of the ovary did not greatly distend the abdominal walls. Fluctuation was distinct over the upper portion, and its boundaries could be distinctly traced. In the supra-pubic region a hard ovoid body could be felt, which was the fibroid uterus, uniformly enlarged to about six times its normal size. The ovarian tumor was of the dermoid variety, weighed about fifteen pounds, and was free from adhesions. The patient made a rapid recovery. The menorrhagia ceased, and the fibroid afterwards did not increase in size.

Mrs. J. remained in good health for about two years, but subsequently died of cancer of the uterus. So in this case we had the simultaneous existence of an ovarian tumor and a uterine fibroma, and subsequently a cancer.

Summarizing my own experience, there have been eight cases in which I operated before the general health had been visibly impaired, and when the tumors had not reached an advanced stage of development. Of these all but one recovered, and the death of the that one was due to an accident. This patient's general condition had not apparently been affected. A small cystoma, without adhesions or other complications, was removed. After the operation she complained very bitterly of a terrible prickling sensation throughout the abdominal cavity, which could hardly be controlled by large doses of morphine. Ten hours later bloody serum, the blood tinge being slight, began to

exude in large quantities from the wound. This continued for about twenty-four hours. She died of exhaustion on the third day. I am certain that, by some mistake, a solution of carbolic acid many times too strong was used in sponging the abdominal cavity. The severe prickling sensation was characteristic of carbolic irritation. Also the pouring out of a large amount of serum would indicate that the peritonæum had been exposed to an irritant of some kind, and this probably was the carbolic acid. Certainly nothing in the previous condition of the patient, or in the operation itself, could account for the speedily fatal result.

Of the other cases I will give briefly the history of one, one entirely devoid of interest, except as illustrating the usual absence of any difficulties in the way of ovariectomy when the operation is performed early; and also as an example of the safe and rapid recovery that, with few exceptions, follows when an ovarian cystoma has been removed at an early stage of its growth:—

January 24, 1883. Mrs. H., White River, Vt., age twenty-four. Two children. After the birth of the youngest, two years ago, noticed a small tumor in the left iliac region, which had grown slowly but steadily, until it now extended several inches above the umbilicus. Before coming to me she had consulted several surgeons, who had told her that she had an ovarian tumor, but advised against an operation at that time because her general health was not affected, and because she was not suffering any great inconvenience. A few days later I saw the patient, and urged an immediate operation, because the tumor was not large, and was probably non-adherent, and because her general health had not been harmed by it.

She consented, and I removed an oligocystic tumor, weighing about fifteen pounds. There were no adhesions, and the operation was attended with no difficulty. I wish especially to call attention to some of the unfavorable circumstances surrounding this case.

She came from her home in the country to the city, and occupied a small room in a crowded tenement house. Added to this was considerable mental disturbance lest she had been unwise in consenting to an operation, contrary to the medical advice she had received. Great anxiety, also, on account of her straitened circumstances contributed to produce a mental depression very unfavorable for ovariectomy. In a word, both her surroundings and her mental condition were as unfortunate as could well be conceived, but her physical condition for the operation was perfect. Without enumerating the tedious details of temperature and pulse from day to day, it is sufficient to say that the highest temperature reached was 101° F. upon the fourth day, and that this steadily declined, and became normal upon the tenth day, at which time she had practically recovered from the operation.

The ovariectomist, unfortunately, cannot elect his own time for the operation in a majority of cases, for many of them do not come under his care before the disease has reached an advanced stage, and before complications have occurred from adhesions, degenerative changes, or septic infection of the system, so grave as to render ovariectomy formidable and often unsuccessful. I have presented these reasons for early removal, however, believing, as I do, that ovariectomy will take a long stride in advance of its former success when it shall become the general and settled rule of practice to remove ovarian tumors as soon as their diagnosis can be clearly determined.











