Original Articles.

THE DIAGNOSIS OF SMALL OVARIAN TUMORS.¹

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OF late years the refinements of diagnosis of pelvic disease have grown in importance and interest. Take, for example, pelvic tumors. Twenty years ago there was very little thought or said about them in the sense in which they are spoken of to-day — that is, tumors situated wholly or largely within the pelvis proper. Such tumors were hardly recognized, or, if detected on examination were quietly ignored until they became abdominal tumors. The growths with which the gynecologist of that time occupied himself were pelvic only as regards their origin. The methods of examination used for their detection and differential diagnosis were almost wholly abdominal — palpation, percussion, mensuration and tapping. Supposing an intra-pelvic mass were detected, it was either, as it was then termed, pelvic cellulitis, in which case it was coaxed to disappear with hot douches, iodine and glycerine, with indefinite rest in bed as the cheerful prospect, or it was a new growth either of uterine or ovarian origin, in which case it was severely let alone until it had become abdominal, when its mode and rate of growth, its accompanying symptoms, and the various methods of examination through the abdominal walls determined which it was, and what its treatment should be. Such was the awe with which opening the abdomen was undertaken, that only when there was no other prospect than certain death was the operation done. The result was that when the pioneers in this branch of surgery began to operate there was a large collection of sizable ovarian tumors waiting for the knife.

I do not need to go into any detailed account of the changes that have taken place in the last twenty years in regard to the diagnosis and treatment of pelvic tumors. Large ovarian cystomata have become a rarity, so that I venture to say that many gynecologists of ten years' standing have never seen one. The last one which I operated on was in 1890, and she came from the backwoods of New Hampshire. Who of us nowadays sees the "facies ovariana" so graphically pictured and described in the text-books of the 60's and 70's, belonging to women whose vitality has been sapped by the enormous tumors which they have been allowed to carry for years, occasional tapping affording a temporary relief. Nowadays women are educated to seek advice for slight and incipient pelvic disorders, and the thorough manual examination reveals the presence of the beginning new growths before they are large enough to have exercised much deleterious effect on the economy. The present sound surgical teaching is to remove pelvic tumors which are giving rise to distressing or dangerous symptoms as soon as they are detected; inasmuch, however, as these tumors differ in their danger to life, and in their prognosis, a careful differential diagnosis is important. The object of this paper is to discuss briefly some of the points of interest in this connection, and to illustrate them by a few cases.

These cases are ten in number, and instead of giving a full history of each, I shall present only the most interesting and suggestive facts.

¹ Read before the Obstetrical Society of Boston, April 21, 1896.

CASE I. Miss S., age thirty, single. Two years ago began to have pain in the iliac regions, lately more pronounced in small of back. Catamenia until three years ago every five to five and one-half weeks, then every four weeks; last three times only three weeks' interval. At operation a small multilocular ovarian cyst of the left side was found and removed. Other ovary was the seat of a small cyst as large as a hickory-nut, and it, too, was removed.

CASE II. Mrs. B., twenty-four, married five and one-half years, three children, two miscarriages. Four years ago had a large heavy uterus, for which she wore a support. Had backache and bearing-down pain, which was made worse by a fall from a chair. Has a feeling of weight in abdomen as though carrying a child, most marked on left side. The only symptom referable to the catamenia is a marked diminution in the past year. At operation a tumor, size of large potato, was found behind the uterus, and was removed. It was a multilocular cyst of the ovary with three cavities. The contents of the largest was hair and fatty material, the second was filled with a yellow gelatinous substance which adhered closely to the cyst wall, and the third contained a transparent watery fluid.

CASE III. Mrs. P., thirty-three, married, no children, no miscarriages. Four years ago had bearing-down pain in lower abdomen, and on examination a tumor was found, since which time she has had frequent and painful micturition at times, and for the past year nausea and vomiting. Constipation. Nothing special as regards menstruation. At operation a cyst of left ovary, size of a cricket-ball, was found filling up Douglas's pouch, and universally adherent. With some difficulty it was shelled out and removed. Right ovary and tube were found diseased and were removed.

CASE IV. Miss G., twenty-two, single. For a year and a half cutting pain in the back, constant, worse on exertion, and also when menstruating. Nothing of importance as regards the catamenia except dysmenorrhea for a few hours. Operation showed a thick walled cyst of left ovary situated behind and somewhat to the left of the uterus, non-adherent. The contents were a brownish thick fluid, probably disorganized blood. Right ovary was also cystic and was removed.

CASE V. Mrs. D., thirty, married, two children. Has had some womb trouble for years. Three months ago, pain in abdomen, bloating and vomiting. For two weeks constant discharge streaked with blood, and gushes of bright blood when on her feet. Menstruation regular. Examination showed a large sensitive uterus. Curetting was advised, which was done by her physician, and the flowing stopped. Six months later she was again seen, when an irregular mass was made out in the posterior cul-de-sac, which felt like a bunch of grapes. One month later celiotomy, at which papillomatous cysts of both ovaries were found. The papillary growth had broken through both cyst walls and had begun to develop on the peritoneum. When seen a year after operation there was a mass felt behind the uterus which was thought to be a return, but as the patient's general health was good and improving, it was decided to wait. Within the past week, which is after an interval of two years, the patient was examined, and no trouble found.

CASE VI. Miss B., twenty-two, single. Eighteen months ago began to flow continuously, using from

one to five napkins a day. No pain. Lost all track of menstruation. Tamponing and curetting by her physician helped for a while; later return of symptoms. Examination showed a movable tumor anterior and to the left of the uterus. The diagnosis was made of a pedunculated sub-peritoneal fibroid or a dermoid. Celiotomy revealed a solid tumor of the left ovary, size of small kidney; no adhesions. Dr. Whitney's report says: "It is a fibro-myoma. The outer wall is composed of a dense, fibrous structure, and within is a loose, connective-tissue growth gradually passing into the centre where the cells are separated by a soft gelatinous substance for quite a distance. I was unable to find any evidence of ovarian structure in the specimen."

CASE VII. Miss C., thirty-two, single. Has complained of constant pain in the back for eight months, following a fall. Under the care of a prominent neurologist other causes for pain were eliminated, and a pelvic examination showed the presence of a tumor in Douglas's pouch, crowding the uterus forward. At operation a cyst of the right ovary, size of a small orange, was found behind the uterus, and removed.

CASE VIII. Mrs. D., thirty-five, married, three children, no miscarriages. For ten years has had menorrhagia and irregular hemorrhages, which have weakened and blanched her. Three years ago was curetted by her family physician. For some time she has used from thirty-five to forty napkins at her regular menstrual period, and once fifty. Looks pale and waxy. No severe pain, but pressure and aching. Frequent micturition. Examination showed an apparently enlarged uterus, irregular in shape, and firm; and a diagnosis of multiple fibroids was made. At operation small ovarian cysts, with hemorrhagic contents and everywhere adherent, were found and were removed.

CASE IX. Miss G., thirty-six, single. For months severe flowing spells, requiring patient to keep in bed, and not controlled by packing or electricity, which was tried by her physician. Feeling of throbbing in left side. Patient pale and weak. Examination showed a tumor of firm consistency at the left of the uterus, and apparently connected with it. Probable diagnosis of fibroid of the uterus was made. At the operation a cyst of the left ovary, size of a small orange, was found. It was universally adherent, especially to the uterus, and in its removal a part of the cyst wall was necessarily left. There was a hematoma of the right ovary. Both were removed.

CASE X. Mrs. B., thirty-three, married, no children, no miscarriages. Had noticed a slight fullness of the abdomen for two years. Menstruation regular until recently, when there have been irregular flowing spells lasting two or three days. Pain in both sides when unwell. Some backache. At operation cysts of both ovaries were removed.

All the foregoing cases resulted in recovery.

This is a small group of cases, but I have confined myself to the consideration of those where the tumor was so small as not to cause any appreciable enlargement of the abdomen, with the idea of seeing how soon they cause symptoms, what they are, and whether any conclusions as to the nature and seat of the tumor can be drawn from them. The statement is commonly made in text-books, that very frequently ovarian cysts develop without the patient's being aware of anything wrong until the abdomen begins to enlarge. I imagine

that in these days when patients consult a physician more readily, such will not be found to be the case. In studying these cases with reference to diagnosis, we find that their symptoms divide themselves, as indeed do those of pelvic disease generally, into three groups: pain, disturbance of function, and reflex manifestations.

Pain was complained of in all the cases but one, more often in back, five cases; lower abdomen, four; confined to left side, one. The backache was the most marked symptom in two cases where the tumor was situated in Douglas's fossa. The case where there was no pain was that of fibroma of the ovary. There were five cases where the tumor was on the left, in only two of which was the pain located on that side. Of three cases where both ovaries were involved pain was located in both sides once. In two cases of tumor of the right ovary no complaint was made of pain on that side. The location of the pain, therefore, is not of much aid in determining the position of the tumor. In the ten cases adhesions were present in four, but these were not the ones where pain was a prominent symptom.

The second group of symptoms has reference to disturbance of functions, namely, menstruation. In only two cases was there no complaint made. By far the most common anomaly (seven out of the ten cases) was an increase in the amount of blood lost. In two cases there was marked menorrhagia so as to deplete and weaken the patient; in one it was moderate, but still excessive. Two showed both menorrhagia and metrorrhagia, in one case the flow having been constant for eighteen months. In one case there were slight intermenstrual flowing spells, and in one the catamenia occurred every three weeks instead of every four or five weeks as formerly. In one case there was a diminution in the amount of the flow. In two cases dysmenorrhea was complained of.

These cases of excessive flowing were interesting for several reasons. In the worst cases the diagnosis of fibroid of the uterus was the probable one, and in four of them intra-uterine treatment was tried, three times curetting, and once electricity, but with either no benefit or very temporary improvement. That in itself was a suspicious circumstance, and might have suggested that the trouble was extra-uterine. The operation showed why the diagnosis was difficult to make. Three of the cases proved to be small ovarian cysts intimately adherent to the uterus and the pelvic walls, so that they formed one solid mass, the fourth was a fibroma, but of the ovary. This connection between adherent ovarian cysts and menorrhagia has been noticed by several observers.

Pozzi² says:

"We have already mentioned the fact that menorrhagia often occurs in the case of cysts impacted in the immediate neighborhood of the uterus."

Coe,³ speaking of small ovarian tumors, says:

"Menorrhagia is the rule, due to chronic congestion and resulting endometritis fungosa. There may be irregular discharges of blood."

Tait⁴ says:

"In some instances ovarian tumors give rise to uncontrollable menorrhagia, and I have pointed out that there seems to be a close association with small cystic ovaries and this serious symptom."

² American Edition, vol. II, p. 128.

³ Keating and Coe: Clin. Gyn., p. 661.

⁴ Diseases of the Ovaries, fourth edition, p. 190-1.

The only case where there was a diminution in the amount of the flow was that of the dermoid.

There were very few reflex symptoms complained of. Two had nausea and vomiting and bloating, one shortness of breath, and two were very nervous. In five no complaint referable to remote organs was made. These symptoms would naturally come on as later manifestations of pelvic trouble, when the nervous system had become gradually affected by the long continuance and increased size of the tumors.

The number of observations on which this paper is based is manifestly too small to render certain any deductions which may be made from them, yet it may be of interest to formulate some conclusion, both as a stimulus to future and more extensive observations, and primarily as a basis for discussion.

The following propositions are therefore made:

(1) Small pelvic tumors are usually accompanied by well-marked symptoms.

(2) Pain is usually present, but its seat does not have any constant relation to the kind of tumor or its location.

(3) Menstrual disturbances are the rule, and by far the most frequent abnormality is menorrhagia or metrorrhagia or both.

(4) There seems to be a direct causal connection between severe uterine hemorrhage and cystic ovaries which are closely adherent to the uterus.

(5) Uterine hemorrhage associated with a pelvic tumor which is uninfluenced by intra-uterine treatment (curetting or electricity) is more likely to be due to an ovarian tumor than a fibroid.

(6) Reflex symptoms are comparatively rare, and occur in the later stages of the disease.

A THIRD SERIES OF TWO HUNDRED CONSECUTIVE CASES OF MIDWIFERY.¹

MARCH 11, 1891, TO AUGUST 8, 1894.

BY A. WORCESTER, A.M., M.D., WALTHAM, MASS.

ONE hundred and twenty-four of these cases were normal, as regards both the labor and the convalescence.

However ready one may be on the threshold of his obstetrical career to meet extraordinary cases, as his experience increases he is sure to prefer the normal to the abnormal; and perhaps for that reason the percentage of abnormal cases tends to lessen rather than to increase, as might be expected from his larger consulting practice.

I wish it were as possible to describe the progress and the management of the perfectly normal, as it is of the exceptional, cases. But after all the safe channel is learned, not so much by the study of painstaking soundings and careful chart notations as by the sight of the wrecks on the bordering ledges. And yet it is by closest observation of the time required on the different courses, as well as of the varied soundings, — observations made and faithfully recorded when all was fair sailing — that the pilot gains the wonderful ability to steer the ship safely through fogs and storms and vexing tides out into the open sea. So our honored former fellow, my old professor² taught. And

now in presenting these dry details, many being of normal cases, and in comparing them with similar statistics previously reported,³ although at first it seems somewhat hopeless to search for helpful deductions yet I have at least found substantiation for some slight changes of method which I trust will not entirely elude description.

Let me first give this general and uninteresting summary of the cases:

Sixty-four, or 32 per cent., were I-paræ, whose average age was twenty-six years; 35, or 17.5 per cent., were II-paræ, average age twenty-eight; 45, or 22.5 per cent., were III-paræ, average age thirty; 21, or 10.5 per cent., were IV-paræ, average age thirty and one-half; ten, or five per cent., were V-paræ, average age thirty-three and one-half; eight, or four per cent., were VI-paræ, average age thirty-six; three, or 1.5 per cent., were VII-paræ, average age forty-one; two, or one per cent., were VIII-paræ, average age thirty-one and one-half; two were IX-paræ, average age thirty-five and one-half; two were X-paræ, average age thirty-seven and one-half; one, or one-half per cent., was a XII-paræ, age forty-two years; one was a XIII-paræ, age forty; six, or three per cent., were not noted.

The average duration of the first stage in 49 I-paræ was 11 h. 30 m., the longest time being 60 h., the shortest 1 h. 30 m.; the average of these same I-paræ in the second stage was 2 h. 30 m., the longest being 7 h. 20 m., the shortest 30 m.

In 25 II-paræ the average duration of the first stage was 4 h. 10 m., the longest being 21 h., shortest 30 m.; the second stage, in 26 cases, averaged 1 h. 25 m., longest 5 h. 15 m., shortest 5 m.

In 33 III-paræ the average duration of the first stage was 7 h. 45 m., longest 23 h., shortest 1 h. 30 m.; the second stage, in 35 cases averaged 1 h. 25 m., longest 9 h. 15 m., shortest 10 m.

In 13 IV-paræ the average duration of the first stage was 6 h., longest 10 h. 30 m., shortest 1 h. 35 m.; the second stage, in 14 cases, averaged 48 m., longest 2 h., shortest 20 m.

In six V-paræ the average duration of the first stage was 7 h. 10 m., longest 17 h., shortest 5 h.; the second stage, in five cases, averaged 58 m., longest 3 h. 20 m., shortest 15 m.

In five VI-paræ the average duration of the first stage was 7 h. 15 m., longest 18 h., shortest 2 h.; the second stage, in 7 cases, averaged 50 m., longest 1 h. 40 m., shortest 15 m.

In five cases of more than six children the average duration of the first stage was 9 h., longest 19 h. 30 m., shortest 2 h.; the second stage averaged 1 h., longest 2 h., shortest 15 m.

In 142 cases the average duration of the third stage was 19 m., the longest 45 m., the shortest 5 m.

As regards the position of the fetus, out of 145 cases where noted, O. L. A. occurred 96 times, or 66½ per cent.; O. R. P., 20 times, or 13½ per cent.; O. R. A., 18 times, or 12½ per cent.; O. L. P., 5 times, or 3.5 per cent.; S. L. A., 3 times, or 2 per cent.; S. R. P., 3 times, or 2 per cent.; and M. L. P., once, or ½ per cent. Thus, in 117 cases, 80½ per cent., the occiput was anterior. In 29 cases, or 20 per cent., it was posterior; in 18 of these cases of posterior position, 62 per cent., operative aid was required; while

¹ Read before the Obstetrical Society of Boston, April 21, 1896.

² Dr. John P. Reynolds.

³ Boston Medical and Surgical Journal, vol. cxx, p. 427, and vol. cxxv, p. 28.