A CASE OF SARCOMATOUS DEGENERATION OF UTERINE LEIOMYOMA WITH METASTASES TO LUNGS AND HEART

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As compared with carcinoma, sarcoma of the uterus is rare (about 1:50). It does not occur so rarely, however, that it may be disregarded. The following case is presented because of the unusual metastases to the heart.

G. W., colored, aged sixty-four, was admitted to the hospital Dec. 21, 1930, complaining of indefinite abdominal pains and vaginal bleeding. The family and past history was irrelevant. The patient began to menstruate at twelve years, and up to the present illness had always been normal as to cycle and duration. She was married at the age of forty, and her husband had died ten years later. There had been no pregnancies.

About ten years before admission the patient first noticed that her menstruation had become irregular. The irregularity had manifested itself first as menorrhagia and later as metrorrhagia. Four weeks before admission there had been rather profuse bleeding for twelve days, accompanied by slight abdominal pain. After several days the patient had again begun to bleed and had been bleeding intermittently until admitted to the hospital. There was a foul odor to the discharge. The patient complained, also, of weakness and loss of appetite.

Physical examination showed a rather obese colored woman with short, gray, kinky hair. She had only two teeth; otherwise, eyes, ears, nose, and throat were negative. The chest was well formed, the heart showed no enlargement; there was a loud systolic murmur at the apex, which was transmitted to the left axilla, and there was a pre-systolic murmur in the second left interspace. Examination of lungs showed no dullness; the percussion note was good throughout. There were moist râles over both bases. The blood pressure was 174/80. An irregular, hard, nodular mass filled the lower abdomen. Vaginal examination was unsatisfactory because of a nulliparous outlet. There was slight edema of both ankles. The deep and superficial reflexes were present and equal.

Examination of the urine showed albumen, one plus; no sugar; pus, one plus.

The blood count showed red blood cells, 2,321,000; hemoglobin 35 per cent; color index .76; white blood cells, 9,200; polymorphonuclears 70 per cent; large lymphocytes 10 per cent; small lymphocytes 20 per cent. The red cells showed moderate achromia, marked anisocytosis, and poikilocytosis, and polychromasia. The Wassermann reaction was negative. Blood typing showed group 4.

The provisional diagnosis was papillary cystadenoma of the ovary or multiple fibroids.

An operation was thought advisable, but because of the poor condition of the patient, it was deemed wise to build her up before operating. On Feb. 2, 1931, she was given 500 c.c. of blood. She was given a second transfusion on Feb. 26, 1931, receiving 400 c.c. of blood. Many blood counts were done in the meantime, but these showed no appreciable differences. The patient continued bleeding and her
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general condition did not change much. On April 12 she had a profuse hemorrhage, following which she died rather suddenly.

The lower abdomen and pelvis were filled with a mass weighing 10½ lb., made up of several tumors, in which the uterus was incorporated. These tumors varied in size from a walnut to a large orange. They were smooth, regular, nodular, and encapsulated. Most of them were situated subperitoneally. Some, however, were intramural. One of the latter had undergone calcification. When one of these intramural masses was cut through, the appearance of the tissue in some areas was not unlike that of brain tissue; elsewhere the softening was more marked. This mass, although partially encapsulated, had broken through the endometrium and had

![Image](image.png)

**Fig. 1. Section through the Pelvic Mass, Showing Two Encapsulated Tumors, One of Which Has Undergone Sarcomatous Changes as well as Calcification**

filled the uterine cavity, which was large and distorted, with soft, spongy, polypoid projections in the process of necrosis, from which there was much sloughing.

The ascending colon was adherent to several loops of small intestine and all this was adherent to the pelvic mass. The liver was not enlarged. It was pale and showed no metastases. The spleen was normal in size and contained no metastases. There were no metastases in the kidneys. The lungs showed no consolidation and no discoloration of any sort. Throughout both of them, however, and especially at the bases, there were many tumor masses varying in size from a small pea to a hen’s egg. These masses were smooth, regular, white, and on section showed a homogeneous structure.

The heart was slightly enlarged; the pericardium was free and contained a normal amount of fluid. The valves of the heart showed no vegetations and no thicken-
Fig. 2. Section through one of the lungs to show the dissemination of metastases.

Fig. 3. Section through heart, showing the metastasis in the wall of the right ventricle.
ing; the auricles were collapsed; the left ventricle was normal. In the wall of the right ventricle was a small mass about 1 cm. in diameter which resembled the tumor masses in the lungs. This mass was incorporated within the wall and extended into the cavity of the ventricle. There was also a smaller mass, the size of a pea, an-

![Microscopic Section](image1)

**Fig. 4. Microscopic Section (× 50) through Degenerating Area as seen in Fig. 1, Showing Capsule and Sarcoma Cells**

![Microscopic Section](image2)

**Fig. 5. High-power Magnification (× 260) through Section Shown in Fig. 4, Showing Characteristics of Cells**

![Microscopic Section](image3)

**Fig. 6. Microscopic Section (× 100) through One of the Metastases in the Lung**

![Microscopic Section](image4)

**Fig. 7. Microscopic Section (× 50) through Metastasis in Wall of Right Ventricle**

swering the same description, enmeshed within the chordae tendineae. There was no enlargement of the mediastinal glands. The brain was not examined.

Microscopic examination of the degenerating pelvic mass showed cells which varied in size and shape; some were spindle shaped and others rather round. There were many multinucleated cells and many mitotic figures.

Microscopic study of the metastatic deposits in the heart and lungs presented approximately the same picture as the pelvic growth.
DISCUSSION

This case presents two interesting features: sarcomatous degeneration of pre-existing fibromyomata and metastasis to the heart.

Sarcomatous degeneration of fibromyomata is not rare. The incidence, as reported by different writers, varies from 0.5 per cent to as much as 10 per cent. These are extreme percentages. If all cases were correctly diagnosed, a fair average would probably be found to fall within 1 to 2 per cent. Some workers even deny that such malignant changes take place and claim that, if a sarcoma develops from a pre-existing fibroma or myoma, it is due not to a degenerative process but to the development of a primary focus of malignancy. We know, however, that fibromyomata of the uterus, especially at or near the menopause, do undergo degenerative changes, such as hyaline formation, calcification, ossification, etc., and since sarcomatous degeneration is often associated with other such changes, it is reasonable to assume that the sarcoma is part and parcel of the entire degenerative process.

Although metastases from sarcoma of the uterus to the different organs and bones have been reported, metastases to the heart are exceedingly rare.

CONCLUSIONS

A case of sarcomatous degeneration of benign tumors of the uterus is presented because of the unusual metastasis to the heart.

Early operation for such tumors is advisable before malignant changes take place.

Recognition of malignant changes should be attempted in the operating room by routinely opening all fibromyomatous tumors removed. If such changes are recognized, a more radical operation is in order. Some cases might thus be saved from recurrence and metastasis.

REFERENCES


WEISS AND HAMANT: Transformation de fibromes à la ménopause. Trois cas de dégénérescence sarcomateuse, Rev. méd. de l'est, Nancy 47: 430, 1919.