SPINDLE-CELL SARCOMA OF THE THIGH:  
A CASE REPORT

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The following case of highly malignant, large spindle-cell sarcoma of five years’ duration, originating in the fascia of the thigh and metastasizing to the pleurae and lungs, seemed to be of sufficient rarity and interest to warrant its report.

Case Report

History: A woman aged thirty-three years was admitted to the Surgical Service of the City Hospital in July 1923. In 1918 a small tender spot had appeared on the outer aspect of the right knee, with no history of antecedent trauma. This did not produce any incapacity but gradually increased in size and by 1921 was as large as a hen’s egg. In February 1923 a biopsy at Roosevelt Hospital revealed a spindle-cell sarcoma. Amputation was advised, but the patient refused. She had lost and gained weight at intervals.

There was no family history of cancer. The patient’s mother, father, and three sisters were alive and well. The patient herself had had malaria twelve years before but otherwise had been well. There was no history of syphilis.

Physical Examination: In general appearance the patient was a well developed female, extremely anemic. The right thigh was larger than the left. On the external aspect of the right knee was a large, nodular, fungating mass, greenish-gray to red in color, and extremely soft (Fig. 1). There were a few small palpable nodes in both inguinal regions, but these were not thought to be abnormal.

The pupils reacted to light and accommodation. The conjunctivae, lips, and tongue were pale. The teeth were in poor condition. There were no palpable nodes in the neck or axillae. The chest was symmetrical, the breasts well developed. On percussion, there was dullness anteriorly and laterally on the left side of the chest. On this side the breath sounds were diminished and the voice sounds distant from the fifth interspace down toward the base. The right chest on percussion was resonant throughout, and there were no abnormal breath sounds. The apex beat was felt in the fifth space in the nipple line. The heart sounds were regular, and there were no murmurs. The nervous system and the genito-urinary system were negative.
Laboratory Examinations: Examination of the blood showed: hemoglobin, 30 per cent; erythrocytes, 2,800,000; leukocytes, 7,800 (polymorphonuclears, 69 per cent; lymphocytes, 31 per cent); urea nitrogen, 16.8 mgm.; blood sugar, .08 per cent. The blood Wassermann reaction was negative. Urinalysis revealed nothing of significance.

Roentgen Examination: The roentgenogram showed a circular shadow in the lower left thoracic region with an irregular area of increased density in the vicinity of the left hilus. A diagnosis of metastatic involvement of the left lung was made.

Treatment: Because of the ulcerating destructive nature of the tumor, a circular amputation at the level of the upper third of the right thigh was done on July 29, 1923. The amputation stump healed three months later. Unfortunately, however, the chest tumor continued to increase in size, as revealed by succeeding roentgen examinations. Deep roentgen therapy was resorted to, with no improvement. The patient's condition became worse. Thoracentesis was performed a number of times to relieve recurrent hydrothorax. The increasing tumor mass eventually obliterated the entire left chest, and pushed the heart over to the right nipple line. Death occurred in January 1924.

Pathologic Findings: On dissection of the amputated extremity there appeared a series of yellowish mucoid-like tumor masses which did not involve the bone. These tumors appeared to have originated from the intermuscular fascia. There was evidence of some necrosis and much hemorrhage. On histologic examination (Figs. 3 and 4) the tumor was found to be of loose texture with many hemorrhagic areas and rich in new blood-vessels. The cells were variable in size but uniformly spindleshaped, with an abundant intercellular stroma. The cells were grouped around the blood vessels, in some areas suggesting perithelial origin.
At autopsy, about 4 ounces of straw-colored, blood-tinged fluid were observed in the left thoracic cavity, and a similar amount in the right. The heart was pushed over markedly to the right, and the left thoracic cavity nearly completely occupied by a tumor mass, yellowish in color and partly angiomatous in appearance. Upon the anterior surface of the right lung were a number of projecting tumor masses, varying in size from a marble to a small orange, yellowish-gray in color, and of a gelatinous consistency. They appeared to be outgrowths of the visceral pleurae. The heart was covered anteriorly by what appeared to be a gelatinous-

![Image of tumor masses on the lung anterior surface.]

**FIG. 4. AUTOPSY PHOTOGRAPH, SHOWING THE TUMOR MASSES PROJECTING FROM THE ANTERIOR SURFACE OF THE RIGHT LUNG**

The pericardium and contents have been pushed over to the right. The left lung shows the appearance of one continuous tumor mass. The liver has been compressed and folded on itself.

like blood clot. The left lung was compressed and atelectatic, and covered by tumor masses intermingled with blood clots. These tumor masses were soft and yellowish in color and in some parts mucoid and gelatinous. The growth was so extensive that it had forced the left diaphragm down to the border of the lowest rib and had also forced the heart over to the right nipple line. All of the mediastinal lymph nodes showed metastases. The aortic lymph nodes also showed metastases.

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