SARCOMA OF THE SUPRARENALS AND SECONDARILY OF THE LUNG.

By J. MAGEE FINNY, M.D., DUBL.;
Past President, Royal College of Physicians, Ireland;
Physician to Sir Patrick Dun's Hospital.

[Read in the Section of Pathology, February 24, 1899.]

THE specimens I exhibit are the left lung and the suprarenals, which are the seat of sarcoma, and, by the kindness of Dr. O'Sullivan, Lecturer in Pathology, Trinity College, Dublin, there are under the microscopes several sections of the diseased organs.

The patient from whom these specimens were obtained was admitted to Sir Patrick Dun's Hospital on 13th October, 1898, and died 20th November, 1898.

The following notes of the case were compiled from those taken by Mr. Gibbon Fitzgibbon, my clinical clerk, to whom I am indebted for his careful and accurate daily records:—

The patient was sixty-six years of age, a labourer in the gas works, and complained of cough, copious expectoration and debility. He looked very haggard and emaciated, and his complexion was notably darker than that of any other patient in the ward, or what we are accustomed to see in those labourers exposed to the heat and vapours at the gas works, who apply for medical aid at the hospital.

The arteries on his forehead, and the radials, were tortuous and atheromatous. The ascending aorta was dilated, and caused an area of dulness and pulsation in the second and third right intercostal spaces near the sternum. A double murmur was audible in this area, but as it was limited to it, and the pulse was not collapsing, it was considered to be due to an atheromatous dilated vessel rather than obstructive and regurgitant disease of the aortic valves; the cardiac area of dulness was not discernible owing to

the emphysematous condition of the border of the left lung, and the cardiac impulse was indistinctly defined in its normal position. There was no dextrocardia.

Examination of the lungs showed the right to be normal, except for emphysema; but the left side was dull on percussion over the lower lobe behind from the fourth rib down, and this dullness did not pass further forward than the mid-axillary line. The dullness did not change on change of posture, and over this area there was an absence of respiratory and vocal sounds, and of vocal fremitus. The upper part of the thorax on the left side in front gave a modified skodaic resonance. It was plain therefore that we had to deal with a case of encysted pleurisy. One or two unusual features were noted—(1) that the decubitus of the patient was on or towards the right or healthy side; and (2), that an area of acute sensitiveness and tenderness to pressure existed over the fourth and fifth ribs and intercostal spaces near the nipple.

On November 4th the pleura was explored in the scapular line at the ninth interspace and a syringe of bright red fluid was withdrawn, which on examination was found to be blood-stained serum, with some leucocytes in it, but these were healthy.

On November 7th a trochar and canula was inserted twice, but no fluid was withdrawn, although with an exploring needle and hypodermic syringe half an ounce of fluid was withdrawn similar to that of the 4th.

As there was no special urgency to tap, and as the nature of the fluid and the constitutional cachexia made me consider it a case of cancer of the pleura, no further attempt to withdraw the fluid was made then or subsequently, and there were no changes noticed in the physical signs, except that, a few days later, a distinct friction sound was audible under the pectoral fold in front of the mid-axillary dullness already referred to. The urine was examined on several occasions and found free from albumin. During the last week of his life he suffered from sleeplessness, progressive weakness, and nocturnal sweatings. The sputum was examined for tubercle bacilli on two occasions, but with a negative result.

The pulse was usually between 104 and 120. The respi-

ration was not increased, and the temperature generally every second day rose to 101° – $101\cdot6^{\circ}$, and fell to subnormal or normal on the intermediate day.

The patient died of asthenia on 20th November, 1898.

The *post-mortem* was made by Dr. Littledale, our then House Surgeon, and the contents of the thorax, the diaphragm, and the kidneys were removed *en masse*, and revealed a very interesting pathological study:—

The heart was greatly hypertrophied, without much dilatation of the cavities; the mitral valve was healthy; the aortic valves were thickened, but not ulcerated, and capable of meeting and closing the opening; the coronaries were calcified, and the aorta presented an excellent example of calcareous plates and rugosities, with very great and general dilatation, producing, in fact, a *cylindroid* aneurysm.

The left pleura costalis was enormously thickened, and contained a quantity of blood, which was encysted to the posterior half of that side. The lower lobe of left lung was a mass of soft, grumous, bloody detritus, which when scooped out left a ragged cavity, without any limiting membrane, and showed a sarcoma infiltrating to more or less depth the rest of the middle part of the lobe.

Below the diaphragm, but unattached to it, the seat of the left adrenal was occupied by a tumour the size of a foetal head, and which lay above and upon the left renal arteries and veins, and pressed into the left kidney. It was a mass of sarcoma rapidly breaking down, and full of blood. When emptied of its contents the sac was distinct from the kidney, while into its infiltrated walls a small probe could be passed from left renal vein. A similar condition, but to a much smaller extent—not larger than a pullet egg—was found in the right suprarenal body.

Thus the case was one in which the left bloody pleurisy played but a small part, except so far as supplying the only physical feature recognisable during life, while there were these distinct foci of sarcomatous disease—viz., the left suprarenal, the right suprarenal, and the centre of the lower lobe of the left lung.

From the rarity of sarcoma being a primary disease of

the lungs, and the frequency of the suprarenals being the first part affected by this pathological neoplasm, it was not improbable, as Dr. O'Sullivan suggested, that the disease originated in the connective tissue or vessels of the left adrenal, that by the open vein it passed through the left renal vein into the circulation, and directly affected the right adrenal, and that by embolic infarction it found its final resting-place in the substance of the left lung. The most careful examination failed to show any extension from the adrenals to or through the diaphragm.

Dr. O'Sullivan has kindly made numerous and various microscopical sections of the left kidney and of the lung. These showed sarcoma of a mixed character, and, what was most remarkable and strange, a number of giant polynuclear or myeloid cells, containing as many as twelve or fourteen nuclei, and resembling exactly those found in sarcoma springing from the periosteum or ends of bone. The case presented therefore the rare peculiarity—not unknown in the life-history of sarcoma—of reproducing cells of connective tissue type, which was not that of the matrix from which it grew, inasmuch as there was in it a complete absence of any bone disease.