C A S E
OF
MYELOID TRANSFORMATION OF THE
LUNGS.

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THE case which I wish now to record is, I believe, unique in the history of pathology. It is a case of myeloid transformation of the lung. Certainly no case is recorded as such, and I have searched in vain among earlier records to find a history of anomalous lung affection, the description of which might approach my own. The case occurred under my care, in the Leeds Infirmary.

A lad, aged 14 years, came into that hospital under the surgical care of my friend Mr. Wheelhouse, for some trifling accident. During his stay Mr. Jessop, the house-surgeon, hearing some complaint from him, examined his chest, and found the left side, as it was supposed, full of fluid. Mr. Wheelhouse asked me to see the boy. As this occurred many months ago I do not remember my own diagnosis, but I do remember that I did not propose paracentesis thoracis, and that I told the students my conclusion was, from the state

of lung, the rapidity of the pulse, and wasting, that the boy would die. My impression is that I believed the case to be one of tuberculous pneumonia. Last autumn the same boy came under my care at the hospital. Believing Mr. Wheelhouse's patient to be long dead, or rather the case having passed from my mind altogether, I did not recognise the boy. On examination I found complete dulness and stillness all over the left chest, and the heart beating under the right nipple. The pulse was 125, or thereabouts, and weak ; and the boy was suffering from wasting and marked hectic, with chills, sweats, and remissions. Owing to the feebleness of the voice, no certain conclusions were obtained concerning the vocal fremitus and vocal resonance. There was little or no cough, and no very great dyspnœa. There were two arguments against the contents of the pleura being fluid—namely, that the intercostal spaces were not bulged, and that the measurement of the left chest only exceeded that of the right by three quarters of an inch. On the whole, however, I presumed, from the position of the heart, &c., that the contents were fluid, and supposed that the inflammation, not attacking the costal pleura, had not paralysed the intercostal muscles. There was no special reason to suspect malignant disease, as the boy was not extremely wasted, nor did he present a marked cachectic aspect. The duration of the disease could not be learnt with any certainty, but seemed to have been very long. Under these circumstances I requested Mr. Wheelhouse to explore the chest with a fine trocar, which he did in two places, but failed to find fluid. The case now became exceedingly interesting, and I fear that our interest became too evident, for the boy, gathering from the manner of the students some suspicion of his approaching death and examination, insisted, to my great regret, on leaving the house. Fortunately, he lived within a few miles of Leeds, and I informed myself of his death some weeks later, and with some difficulty obtained leave for a post-mortem.

Mr. Jessop kindly accompanied me, and made the examination. We then discovered a most extraordinary state of

things. On raising the sternum we found all the front of the chest occupied by a greenish-white mass. This mass extended three or four inches across the middle line to the right, thrusting the heart into the right chest, and filling entirely the left half of the thoracic cavity. Vertically, it extended up to the clavicle, and, thrusting down the diaphragm, extended below as far as the left kidney. The right border presented the outline of the margin of a lung, was thinned off from the under side, and showed a trace of the lobar division. On attempting to thrust a knife into the apparently malignant mass, we found to our astonishment that it offered a great, I may say almost insuperable, resistance. We therefore dug into it as well as we could, and found it to consist of a dense fibrous substance, very plentifully filled with little bony plates and masses, some resembling terminal phalanges, others like sequestra. These varied in size from a pin's head to an inch or two in length, and were of true bony structure. On now passing the hand under the ribs we found our way into a large quantity of paltaceous and sanguineous material, breaking down at once into pulp on the least pressure, and also containing myriads of the bony morsels.

We supposed this to be the true and original myeloid growth, and that from it the overlying lung had become impregnated and charged. But we performed our autopsy under most unfavorable circumstances, in a dark awkward corner of a poor dwelling, and the true connection of the parts could with difficulty be ascertained. We were quite unable to find any attachment about the ribs or spine which could have pointed to the first seat of the evil.

We were watched by the friends so closely that we deemed it inexpedient to carry away any of the parts. Mr. Jessop, nevertheless, was able to pocket surreptitiously pieces of the hard and of the soft tumours as specimens.

We learned from the friends that the boy had suffered from dyspnœa from early childhood, and had, indeed, never been able to join in the sports of his companions. We enclosed portions of the tumour to Dr. Wilks, from whom

we received a letter which fully bore out our own diagnosis, and that so completely that I have obtained his consent to quote it at length. He says—

“I was so occupied when your specimen came that I handed it over to my successor in the pathological department of Guy’s, Dr. Moxon, to examine for me. I told him it looked as if it had grown from bone, as from the jaw, and might be a large epulis.

“I told him it resembled the fibro-plastic tumours of Lebert, but which were really fibro-myeloid. I drew a large myeloid cell, explaining what I thought the tumour would contain. Dr. Moxon informed me, on Saturday, that he had found exactly what I conjectured, and had some drawings of the cells.

“I will request him to communicate with you.

“The case appears a very remarkable and interesting one.

“I have seen almost every kind of growth spring up in the chest, mostly arising about the root of the lung ; but never myeloid.

“Myeloid is described as occurring in soft parts, but I have never seen a case unconnected with bone.”

According to the request of Dr. Wilks, Dr. Moxon forwarded to us the interesting and valuable communication which I also subjoin :

“It is now long since I received from Dr. Wilks a small specimen for examination. This consisted of a hard substance and a soft, separate from each other. I examined both carefully the day after I got them, and have repeated the examination this morning. I do not think there is anything to be added to your own description of them. The harder is composed of remarkably tough fibrous tissue, imbedding denticulate portions of loose bone, perfect in its structure, and also growing into the fibre-tissue. Two peculiarities in the fibre-tissue seemed worthy of notice :—1st, it contained thick ramifying bundles, which ran from bone to bone, distributed like vessels, and each, on section, seen to enclose a blood-vessel of greater or less size, surrounded by concentrically arranged elements, reminding one forcibly of

the structure of bone ; 2ndly, the tissue at many points had localized portions of growing elements thickly packed, and having appearances quite accordant with malignancy in the tumour—*i. e.* strongly marked outline and bright nucleoli.

“The softer red substance was a perfect example of myeloid. The characteristic cells or capsules were seen before the addition of acetic acid to have very soft succulent-looking stroma between them, imperfectly fibrillated ; this cleared up with acetic acid. Much of the myeloid showed granular degeneration of the cells.

“It has never chanced to me to fall on such a case, which is a most highly interesting one. We have in the museum of Guy’s an example of myeloid disease of the lung in distinct masses ; we have also bony tumour of the lung. I do not see anything like it in the ‘Pathological Transactions.’ ”