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A CASE OF MALIGNANT INTRABRONCHIAL GROWTH,

Associated with a Misleading Train of Symptoms.

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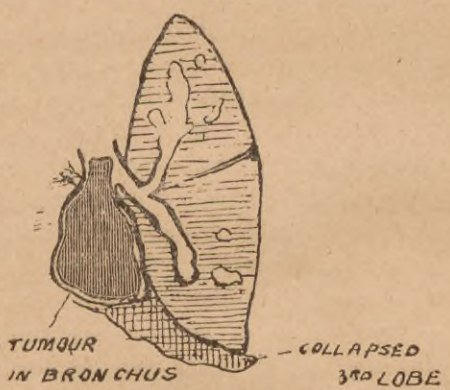
I am indebted to Dr. A. G. Nicholls for the clinical notes of this case.

The patient, a woman of 50, died four hours after admission into Dr. Stewart's ward, and thus there was no possibility of making full observations upon her condition *intra vitam*. She had, however, been twice to the out-patient department of the hospital. A year ago last summer she presented herself at the hospital with what was considered to be commencing tuberculosis of the right apex. She did not reappear again until February 21, 1895, then the right apex was found dull in front, with blowing breathing and numerous moist rales. Behind over the upper half of the right lobe there was a similar condition. In the lower half of the lung there was diminished resonance and feeble breathing. Since then the patient had not returned to the out-door department. Her sister stated, however, that in the meantime she had had several attacks of hæmorrhage from the lungs. It will thus be seen that the history dated back for several months and that there was a curiously suspicious tubercular symptomatology, with cough, shortness of breath and hæmoptysis. On admission the patient was apparently very ill, urgent symptoms having come on, at the most two days before admission, with shivering feeling, but no distinct rigor; severe headaches and much coughing. She was a heavily-built woman, somewhat anæmic, with cyanosis of the lips, face and finger tips, which were distinctly clubbed. The respirations were short and hurried, 44 per minute. There was intense dyspnœa, over the right side expansion was very much diminished, the whole of the right side was dull in front and behind, with slight resonance only behind and below. The left lung was hyperresonant. On auscultation the breath sounds on the right side were cavernous in character in front and over the upper half of the lung behind. They were tubular in the axilla and diminished below. The expectoration was thick, viscid, yellowish and muco-purulent. The breath sounds on the left side were exaggerated. The expirations were prolonged.

The pulse was 120, of moderate tension and regular. There were no murmurs, neither was the second sound exaggerated. The condition of the other parts, determined clinically, does not call for remark. With such a history and with such symptoms there is little wonder that in this case, in spite of the stout build of the patient, the provisional diagnosis was made of pulmonary phthisis, with cavitation of the apex and hæmoptysis, and with generalized tuberculosis of the right lung. The condition of the left lung was evidently that of compensatory emphysema. That the patient was moribund is, I think, an ample excuse for failure to confirm the diagnosis by examination of the sputam.

At the autopsy, however, this most reasonable diagnosis was found to be completely astray, save that the left lung was very voluminous and that there was present a generalized compensatory emphysema. This, however, was not all that was present; at the edge of the lower



Diagramatic representation of the relationship of the Intrabronchial growth to the Bronchi.

lobe and along the the diaphragmatic surface were areas of lobular consolidation relatively firm and of greyish-red colour. There was in addition a muco-purulent bronchitis, evidently, from the presence of slight reddening and of red corpuscles in the contents, of an acute character. Cultures from these areas of consolidation gave the diplococcus of pneumonia. Here, then, the very position of the acute inflammation in this left lung spreading immediately over the diaphragm was such that almost inevitably in the examination of the moribund patient it would fail to be discovered. There was no apical tuberculosis, nor were there any signs of tuberculosis elsewhere throughout this lung. Turning now to the right lung, this presented a condition of very great interest. Upon opening the thorax the organ was found very full and firm, firmer than hepatized lung; it was surrounded

generally by very firm adhesions, so firm that laterally and posteriorly the parietal pleura had to be removed at the same time. The organ weighed 1025 grms. This fullness affected the upper and middle lobes only. These two occupied almost the whole of the pleural cavity, the lower lobe was collapsed and adherent to the diaphragm. While the thickening of the visceral pleura was great at the apex, there was no sign there of puckering or of obsolescent tubercles.

On section the organ cut very firmly, it was of grey colour with distinct enlarged fibroid bands. The condition of the two upper lobes was that of chronic interstitial pneumonia. They presented further most marked generalised bronchiectasis, affecting both bronchi and bronchioles. As above remarked, the dilatation was generalised and not saccular to any entent. These dilated passages contained fairly fluid muco-pus of salmon colour, not fœtid. Their walls were much injected.

Upon dissecting the main bronchus of the lung a very uncommon condition was discovered; at the point of division into the bronchi for the three lobes a dirty grey rounded mass with ulcerous extremity was seen, almost completely filling the lumen. Upon further dissection this mass was found to be a cylindrical truncated projection or outgrowth along the main bronchus, 16 mm. in diameter, by 16 mm. long, from a large soft, flesh-coloured tumour, lying in a smooth walled sac in direct communication with the main bronchus, which sac, from its anatomical relations, could be none other than the bronchus of the collapsed lower lobe. With expansion, the cartilages had become atrophied and unrecognizable to the touch.

While fibroid phthisis or interstitial pneumonia is in itself a most frequent cause of bronchiectasis, it was clear from the arrangement of the parts that the outgrowth of the tumour into the main bronchus had acted as a ball valve, permitting entrance of air into the first and second lobe during inspiration, and occluding the bronchus during expiration. Then here there was an additional mechanism leading to dilation of the bronchi.

While the tumour, which was 7.5 cm. long by 5.3 cm. across, was in the main free in the dilated bronchus, it was firmly adherent below and to the inner side. The peri-bronchial glands lying to the front of the main bronchus and growths were singularly large, the largest being 4x3 x3 cm., and having in its centre what appeared to be a secondary growth. No other secondary growths were recognizable elsewhere.

Microscopic examination of the lung showed a most interesting condition of interstitial pneumonia, with numerous large cells within the alveoli, which varied in size and appearance from that of the ordinary

so-called "dust cell" to large polynuclear pigmented cells. I have never seen so large a number of this form of giant cells. The tumour, on the other hand, was found to be of a type presenting great difficulty in diagnosis; while possessing an alveolar arrangement and an appearance under the microscope remarkably like carcinoma, further study reveals a suspiciously sarcomatous character in the part of many of the cells filling the aveoli. Following Orth and the majority of recent observers, it may be well to describe it as a sarroma of the bronchial wall—although almost as many authorities have called such tumours cancerous. I may later revert to the finer details of the growth.

This specimen then, is interesting, not only from the singular position of the primary tumours, but also from the clinical symptoms to which the growth gave rise. The apparent cavitation, it is seen, was due to the very extensive bronchiectasis. The hæmorrhage and hæmoptysis to the ulceration of the free end of the growing tumour, the dullness over the lung in general, not to any general tuberculous extension, for there was no tuberculosis anywhere, but to a condition of general dense pleural adhesions with associated interstitial pneumonia.