OBSERVATIONS ON CERTAIN FORMS OF DISEASE OF THE LUNGS.

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III.—PHTHISIS: GENERAL REMARKS; GROUNDS OF PROGNOSIS; DISTINCTION BETWEEN GENERAL AND CIRCUMSCRIBED TUBERCULAR DEPOSIT; SPECIFIC FORMS OF THE DISEASE; ACUTE PHTHISIS; VOMITING IN EARLY PHTHISIS; ARRESTED PHTHISIS; REGULAR HECTIC; TUSSIS FERINA; PERSISTENT CAVITIES; INFLAMMATION OF THE WALLS; ILLUSTRATIONS OF NON-TUBERCULAR CAVITIES; EARTHY CONCRETIONS ENSUING ON DEGENERATION OF TUBERCLE; ARREST OF PHTHISIS BY COLLAPSE OF THE LUNG; GENERAL RECAPITULATION.

[*Concluded from page* 1047.]

ANOTHER group of consumptive cases has for its characteristic symptom a violent cough meriting the name of *tussis ferina*. In some cases this is almost the only symptom—a loud ringing cough without expectoration, resulting, apparently, simply from the irritating presence of tubercles in the lungs. A few details of such cases will illustrate the characters of this group better than any more general description.

CASE V. *Tussis Ferina: Cavity in the Lungs.* In 1850, I saw a lady, aged 28, who had been pronounced, on the most competent authority, six years previously, to have pulmonary consumption. She was thin and weak, but led a life of ceaseless activity. She had never hæmoptysis, and only now and then, in a morning, a little yellow expectoration. The right subclavicular region was flattened. And here was feeble inspiration, with long expiration, loud vocal resonance, and some dulness on percussion. At the time when I examined her chest, no moist sounds were audible. There could be little doubt that she had suffered disorganisation of the apex of the right lung, and that a cavity had formed there which was now undergoing the process of cicatrisation.

She was weak, but prominent beyond all her other symptoms was a loud barking cough, quite a *tussis ferina*, sounding all over the house and ringing in every one's ears, more distressing I believe, however, and certainly more alarming, to her friends than to herself.

And still she continues unceasingly active. An attack of continued fever, with protracted irritability of the stomach, which has occurred intermediately, has not impaired her strength, nor has it cured her cough, which returns still on occasions, loud, ringing, startling as ever.

The number of cases such as these might be increased, with every variety of physical signs, but there is nothing to add to the description of the symptoms. The patients are for the most part from the same class of society; ladies under middle age, unmarried, with no cares of their own, but of that active disposition which finds work and makes cares in assisting others. Probably this condition of life and turn of mind may have something to do with developing this particular form of disease. Such are, an originally delicate constitution; intolerance of the restraint which might in the first instance have prevented the cause from acting; irritability under its immediate effects; and lastly, means to ward off many of the further local and constitutional effects of the disease, which would have run on, in the poorer classes, to confirmed phthisis.

Probably each one could, from his own experience, add other like groups of cases, where the permanence of one symptom or another has masked the usual appearances of the disease, and given to it a peculiar form and character of its own. And here latent phthisis, consisting in the suppression, not of one, but of all the symptoms of the disease, should find mention; though, from its nature, this part of the subject would scarcely admit of any varied illustration.

I would not, however, enter professedly on the discussion of latent phthisis, though the following remarks may seem to touch closely upon the subject. We have seen how phthisis may be hurried on in the acute form, and have considered some of the more remarkable deviations from the usual course of the disease. We may profitably regard it from yet another point of view,—considering successively the chief conditions which may arrest its progress, or even seemingly effect its cure. It is more agreeable to consider these conditions in this light, as aiding our efforts, than as baffling our researches under the name of latent phthisis. They involve difficulties it is true, but not of a nature either to dishearten or perplex us. For, with their recognition, commonly, the disease is no longer latent to us, and in their solution are involved some of the most interesting problems in the pathology of tubercle. From the obscurity which sometimes invests a case of phthisis, we may take encouragement as to the possible effects of our care in allaying the symptoms and arresting the progress of the disease. And while, from the sudden manner in which the symptoms may light up afresh, we must distrust the permanency of the results of our treatment, we cannot but feel how very important to life and comfort those means are which we almost disparagingly term palliatives. I believe that scarcely in any case does the physician contribute more to the comfort of the patient whose life he is trying to prolong, than when anticipating or ministering to the ailments incidental to chronic pulmonary consumption.

The existence of a cavity in the lungs, indeed, apart from the pathological nature of its cause, is a matter of no such great moment. I have seen, for instance, a small cavity which most likely had existed for more than thirty years. It had originated probably in simple inflammation of the lung. And after its first formation it had given no further annoyance than arose from the necessity of expectorating the secretions which accumulated there.

Tubercular cavities may exist in the same way, unbetrayed by any symptoms, unnoticed and unknown, for long periods. We may stumble upon them in dissections of cases where we never suspected their existence. Or we may watch the entire subsidence of all their symptoms, under the influence of treatment or of intercurrent disease. But, though the symptoms be subdued, or reduced to a degree of tolerable comfort, still the disease remains. And a tubercular cavity vindicates its importance in various ways.

Speaking generally of the repair of tubercular disorganisation, it may be premised that, not only do the symptoms of pulmonary disease subside under treatment, or, so to say, spontaneously; but that actual reparation of the lesion is possible in all degrees up to complete cicatrisation of a cavity. The complete organic repair of a large tubercular cavity is, to all experience, a very rare occurrence. And this I have never seen. But the repair of small vomicæ is a very familiar process. It may be often traced, in all its stages, in different cavities in the same lung; where membranes of all degrees of thickness and consistency, and walls of all degrees of smoothness and polish may be seen side by side. And a lung thus affected is a study of great pathological interest.

On the outskirts of the diseased portion, perhaps, we may find tubercular masses of all sizes, and all degrees of consistency, from the single tubercle, up to the mass whose centre has softened and come away, constituting thus one form of a vomica. Further in, the commonly received idea of a cavity may be more adequately illustrated in ragged excavations, whose walls are formed of disintegrated pulmonary tissue, mixed with tubercle, and bathed in fluid pus. These appearances are characteristic of progressive changes. But here a new series (with which we have now more particularly to do) of retrograde or reparatory changes, sometimes succeeds. For, by the side of these cavities, may be seen others, with smaller walls, overlaid in patches with curdy looking flakes of false membrane. The softness of the membrane, its loose adhesion to the walls of the cavity, and the dusky bleeding spaces around and beneath it, all bespeak its recent origin. And others yet may be found by the side of these, continuing the history of the reparatory changes, where the lining membrane is deposited uniformly, and the subjacent structures are pale. As if here all disorganising action had ceased, and only a slight effort of nature, a little healthy action, were wanting to complete cicatrisation.

Here is the point to which I would ask attention. There may seem to be little to be done, yet such a state of parts as this is practically very far from actual repair, and involves great dangers. Let us glance at some of these now. In what condition is a consumptive patient, in whose lungs repair has stopped at this point, leaving one or more persistent cavities?

In a case of confirmed phthisis, a cessation of all disorganising changes, is as much as we have any reason to expect, even on the most hopeful view of the case. This point gained, much of the sympathetic constitutional irritation subsides. The cough becomes less constant and wearing as there is less to be expectorated. A sound night's rest, freedom from hectic fever and from night sweats, are symptoms doubly good, in the removal of their cause and effects alike. But the local organic

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repair is very far from perfect. And the patient lives on the verge of the most imminent danger. Such is the lesson which the following case inculcates.

Case vi. *Tubercular Cavity with Obscure Symptoms.* An unmarried lady, 53 years of age, was always fidgety and nervous, fancying that she had a thousand ailments, and dosing herself accordingly. Lately she had been treating herself with blue pill for a pain in the region of the liver. But a few months before she had been thoroughly examined with reference to all the points on which she felt anxious, and pronounced to be free from all the organic diseases which she then contemplated.

The peculiar temperament of the patient seemed to forbid any more particular investigation of the symptoms than was absolutely necessary. Besides her general complaints she was liable to occasional epistaxis. The constant hawking which was observed seemed referrible to a relaxed state of the soft palate.

An astringent gargle, a little bark and valerian, and attention to the ordinary rules of diet, soon effected a material improvement. And now she stated her fears that she had pulmonary consumption. And I was at much pains to assure her how groundless her fears were, in the entire absence of all the ordinary signs of phthisis; but without examining her chest. Two days afterwards, however, a sudden attack of bronchitis gave a pretext for so doing, and auscultation disclosed the existence of a large cavity beneath the right clavicle. Another two days, and she was dead. She had a sudden accession of dyspnœa, and sank at once, with all the symptoms of coagulation of the blood in the pulmonary artery. The body, however, was not examined to ascertain this point.

Now I am not quoting this case merely as a caution to others to avoid my own too palpable error, but because its abridged details are worthy of notice on more than one account. It is notable as an instance of phthisis running on covertly to extensive disorganisation of the lung. So covertly, indeed, that it was thought better not to alarm a nervous patient, better not to seem to attach so much weight to her expressed fears as to examine her chest to see whether these were true or false. And yet in her chest there was cognisable disease which, within four days of that time, directly or indirectly, destroyed her life. It shows the importance of that disease, however covert, and points to the very serious liabilities which the presence of a tuberculous cavity in the lung involves.

Coagulation of the blood in the pulmonary artery, assuming it to have taken place here, is a danger, however, of too rare occurrence to be matter of apprehension under the circumstances. The most probable danger contingent on the persistence of a tuberculous cavity is the rekindling of the ordinary symptoms of phthisis on some slight cause. Of this it is unnecessary to speak here, at length; but a less familiar accident, namely, acute inflammation of the walls of the cavity, deserves especial notice.

The symptoms of this occurrence are very characteristic; and beyond all the rest, the dirty paint-like sanies with its sickly fœtor, dripping from the mouth, marks this form of disease. There is, however, nothing specifically referrible to a tuberculous cavity in these symptoms; indeed, the case in which I have seen them most strongly expressed, was not a case of phthisis at all, but, strictly speaking, one of inflammation of the walls of dilated bronchi, in connection with cirrhosis of the lung. The brief details of the case are nevertheless worth recording here.

Case vii. *Inflammation of the Walls of a Cavity in the Lungs.* A poor wretched girl came into St. Bartholomew's Hospital to die. She was so ill that she could tell little or nothing of her previous history. All that could be learnt was, that she had long suffered from cough and dyspnœa, but that, within the few last weeks, her distress had become quite intolerable. She was oppressed with general anasarca; and, as she sat up in bed, coughing and labouring for breath, a dirty creamy looking offensive sanies dripped, or rather streamed, from her mouth. I never saw such a picture of distress.

Death soon put an end to her sufferings. Dissection showed a healthy state of the right lung, which extended beyond the mesial line far into the left half of the chest. The left pleura was universally adherent by tough old fibro-cellular tissue. This lung was shrunk up into a small mass, tough and hard, the cut surface glistening with fibrous bands, which were as hard as cartilage. It was hollowed out into a large irregular cavity, or series of cells, most distinct at the apex, but extending quite down to the base of the organ. The walls of these cells were in a state of inflammatory congestion, and the whole lung exhaled the offensive sickly smell of her expectoration. There were no tubercles anywhere. The kidneys were large, granular, mottled with opaque deposit, and the capsule preternaturally adherent.

It should be observed with reference to this case, however, characteristic as the single symptoms may be, that inflammation of a tuberculous cavity does not usually induce such severe symptoms as were developed in this case, nor does it tend so directly to a fatal issue. It is not from the attack of acute inflammation that the consumptive patient sinks; but, under the circumstances, the whole disease seems to be lighted up afresh. And the symptoms of inflammation of the cavity are lost, before death, in those of general softening of tubercle throughout the lungs. Nor yet is there anything very unmanageable in the disease itself, apart from its connexion with the condition of the rest of the lung; for it yields readily, for the most part, to active blistering.

There are so few opportunities of observing the symptoms connected with the existence of a cavity in the lungs independent of tubercle, that I will make no apology for introducing here the somewhat lengthy details of another case. Apart from its bearing on the subject under consideration, it has the highest interest in connexion with the operation of paracentesis thoracis, which was here performed, in the full belief that we had to do with a collection of fluid in the cavity of the pleura.

Case viii. *Large Cavity in the Lung: Paracentesis Thoracis.* I was asked by my friend Mr. Brenchley, of this town, to see an officer of the Indian army, aged 27, who had been suffering from cough, with profuse expectoration, for nearly two years past, under which his health was failing. He had had fever in the Punjaub ten years before, but recovered. Two years ago he was invalided, on account of an abscess of the liver, which he was supposed to be suffering from. On shipboard, on his return home, he had a sudden abundant expectoration of pus. A few days after this was established, he had a violent attack of pain in the right side of the chest, with fever. The cough and expectoration had continued ever since; he had got steadily weaker; and the only events which had disturbed his even downward progress were two or three attacks of hæmoptysis, which he connected, right or wrong, with a free action of mercurial purgatives.

On examination of the chest, there was feeble breathing, with dulness on percussion, all down the right axillary region, and over the lower half of this side behind, with buzzing vocal resonance and absence of vocal vibration to this extent. There was also some flattening of this side of the chest. Beyond the limits indicated, auscultation and percussion gave normal results. He was expectorating a pink frothy puriform fluid, to the amount of nearly a pint in the twenty-four hours.

He had consulted many physicians, whose somewhat conflicting opinions testified to the obscurity of the case. I thought that he had suffered from abscess of the liver, pointing through the lung; and that the fluid was at present collected in the pleura; the adhesions between the lung and diaphragm having fallen down, and the contents of the hepatic abscess having passed into the pleura. The history of the case seemed to fix the date of this occurrence, and of the consecutive pleurisy, very precisely.

There was little to notice during the next three months in his downward progress. The operation of paracentesis thoracis was hinted at, but the probability of its succeeding was too small for the operation to be urged. His throat now became painful, apparently from the continual passage of the irritating matter; his tongue became aphthous; and his appetite failed. The expectoration also got very fœtid; and, at his own request, an opening was made in the walls of his chest, to save him the agony and disgust of bringing up this horrible sanies through his throat. Mr. Brenchley introduced a trocar between the fourth and fifth ribs, to the outer side of the nipple, at a point where the percussion was dull and very few respiratory sounds were to be heard, and drew off about a pint of the most horribly fœtid fluid. Some ounces more followed through the canula, which was replaced in the wound in the afternoon.

The immediate physical result was the substitution of tympanitic resonance and metallic tinkling for the dulness and obscure bubbling which had been observed before the operation. When he had recovered from the alarm of the operation, he began at once to rally; his strength and appetite returned; and we only regretted that the relief had been delayed so long. A little of the expectoration, examined under the microscope a few days before, seemed to have come from a large smooth secreting surface, as it consisted entirely of thin membranous

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shreds, like flakes which might have been cast off an inflamed serous surface.

Another month passed away, with only the little drawbacks and difficulties attendant on maintaining the opening in the chest. When the tube got plugged, all his symptoms returned at once with severity, to disappear as rapidly when the discharge was restored. He got steadily better in health and strength; but auscultation of the chest pointed out no marked improvement there, except in the diminution of the moist sounds, in connexion with the diminution of the amount of the discharge.

The tube, which had been introduced at right angles with the ribs, gradually altered its position, from the end within the chest being drawn or pushed upwards, the canal being thus much lengthened. This necessitated continual adjustment of the tube; and one day, while he was doing this himself, suddenly the button came off, and the tube slipped out of sight and reach, apparently into the chest! In a few hours, the re-establishment of the fœtid expectoration, with all its horrors, had reduced him to a state of great distress. A canula was again introduced carefully at right angles, but only a few drops of blood, and no matter, flowed, though it was allowed to remain for some hours. A careful reexamination of the track of the former outlet failing to detect the old tube there, and the symptoms still continuing, a new tube was forced along this passage, the matter began to flow, and all his symptoms cleared up again.

It seemed that the cavity was contracting from the bottom upward; and though the presence of the bit of tube in the pleural cavity was matter of regret, yet we hoped that it might become disintegrated, and so discharged, before the cavity was ultimately closed.

Another week passed away very well, and another not quite so well, there having been some return of hectic, which was ascribed to his daily allowance of opium having been diminished. But nothing had happened to discourage the belief that he might yet be restored to health, when suddenly he had an attack of dyspnœa, with slight hæmorrhage from the tube in the wound.

He was calmed by a grain of opium, and had some quiet sleep. About twelve hours afterwards, the dyspnœa returned; then he sank quietly, and died in about half an hour.

On examination of the body after death, the left lung and heart, and the abdominal viscera generally, were healthy; the morbid appearances were confined to the right side of the chest. The right pleura was free at the apex, and over the upper portion of the posterior surface of the lung; elsewhere it was closely adherent by firm old fibro-cellular tissue, which was generally infiltrated with serum, except on the axillary aspect, where the adhesion was singularly hard, dry, and close.

The whole mass, when removed from the chest, maintained pretty exactly the outward form of the right lung, and the division between the upper and middle lobes was quite distinct; but the space which the middle lobe and much of the inferior should have occupied constituted a large cavity filled with loosely coagulated blood.

The walls of this cavity consisted internally of pulmonary tissue, from which hung long loose flocculi of puriform lymph. Along the walls ran raised lines, which, on section, appeared to be composed chiefly of contracted bronchial tubes. There was no lining to the cavity: on scraping the walls, the pulmonary tissue appeared at once, brittle, pale, granular, as in the third stage of pneumonia, and shading off into the pale and œdematous, but otherwise healthy tissue, of which the rest of the lung was composed. There was no deposit of tubercle anywhere.

The outer and lower boundaries of the cavity consisted of the thickened pulmonary pleura, which displayed in some parts the reticulated lines of the surface of the lung, and in others, towards the edges of the cavity, was covered with a thin sheet, as it were, of lung-structure. For one such space, just at the most depending part of the cavity, the opening had been made: the lips of the wound were dark from deposits of pigment, but otherwise healthy, and quite smooth. The source of the hæmorrhage could not be clearly made out, but a few vascular points towards the posterior part seemed its most probable seat. The piece of tube lay darkened, but not at all disintegrated, among the contents of the cavity.

The liver was generally healthy, only on the upper surface its structure was more tough and fibrous than elsewhere; and to a wide extent this part was closely and firmly adherent to the diaphragm. No more distinct evidence of the former existence of an abscess in the substance of the liver could, however, be discovered; nor any cicatrix marking the place where the diaphragm had been perforated.

I have seen another case where a cavity in the lung, constituted in a similar manner to this, but essentially tubercular, was tapped with the same immediate relief, and the same fatal issue by sudden hæmorrhage into the cavity. In both cases, the operation was undertaken in the knowledge that the fluid was immediately beneath the surface, and safely accessible, and in the belief that we had to do with empyema secondary to disease of the lung and the liver respectively. This belief was erroneous, but without it I should scarcely have ventured to recommend the operation; and the more correct diagnosis would have stood in the way of what appears from the immediate result to have been, under the circumstances, the correct plan of treatment.*

Looking, however, beyond its immediate beneficial result, it is a matter of serious consideration what share the operation had in inducing the fatal hæmorrhage here. The supposition of any large vessel having been wounded may be at once dismissed. The most careful examination of the parts after death lent no confirmation to this supposition, which is opposed, moreover, to the general history of both cases. Indirectly, however, the hæmorrhage may perhaps be connected with the operation, as a result of the condition of the suppurating surfaces which was thereby induced. And such a possible contingency must be taken into account, as a very serious drawback to the value of the operation as intended to relieve the process of expectoration. But it is needless to pursue this subject further, and to consider the possible influence of the operation in effecting a cure; for I suppose that few would doubt but that a cavity, presenting all the conditions for a favourable result to attend such a mode of procedure, would be much better left to the powers of nature than subjected to the unknown influences of a direct admission of air. Such interference can be required only where the urgency of the present symptoms overrules the objections which a careful consideration of the subject will suggest against an operation which contemplates so little real benefit as does the puncture of a cavity in the lungs.

It is not an undue space that these details, however long and discursive, have occupied; for the pathology of persistent tubercular cavities is a clinical problem that we are daily called to study, and which is presented to us in every possible point of view. Leaving this subject, however, now, I would pass on to the consideration of a further and more hopeful stage in the history of tubercular degeneration; namely, the repair of its effects, such as we are content to call repair.

With the completion of the repair of tubercular disorganisation of the lungs, and the removal of the tubercle, we necessarily lose the proof of the previous existence of a cavity; for we cannot affirm the tough hard cicatrix, which we may find, to be the contracted wall of a former cavity. Such absolutely perfect repair, however, is the rare exception: there are numerous intermediate stages short of this; and one of these, marked by the presence of little earthy concretions, I would more particularly notice.

We are all familiar with the little chalkly nodules so often found in the black and puckered apices of the lungs, imbedded in dry cellular tissue, with no signs of any active process going on around them. From their position, and from the previous history of the subjects in which they are found, it is generally inferred that they result from changes which have taken place in and about tubercle deposited there, and that the tubercle has become obsolete, or that its peculiar disorganising tendencies have ceased. Acquiescing generally in this view of their origin, and of their present signification regarded from an anatomical point of view, I would dwell for a while on certain symptoms with which their presence in the lungs is occasionally connected.

Chalky expectoration in phthisis is a favourable symptom; for it indicates a state where little is wanting to effect a cure of the pulmonary affection, how rarely soever that little may be accomplished. We accept it, not as a sign of cure, but of the passive nature of the disease; but a sudden increase in the

* Dr. Edw. Barry (*On the Three Digestions and Discharges of the Human Body*. 8vo. London: 1759) recommended the chest to be punctured in cases where there seemed to be no other way of thoroughly evacuating or "cleansing an abscess of the lung." The signs to which he trusted to indicate the seat of the abscess were pain, or sometimes a sensible enlargement of the ribs (p. 410). It is scarcely a matter for surprise that, acting on these indications, on one occasion he missed the cavity (p. 430). On the only other occasion where this mode of proceeding was adopted, the operation was not completed. A case where a tubercular cavity was punctured, has also been related by Dr. Hastings, in the *London Medical Gazette*, vol. xxxv, p. 378.

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amount of the chalky expectoration, with feverish symptoms, showing that the tolerant disposition of the lung and of the constitution, to which we trusted, has been temporarily superseded, must cause, for a time at least, the greatest apprehension. For it is not at all unlikely that this local intolerance may be accompanied by a general tendency to deposition of fresh tubercle. Although, then, the expectoration of these chalky masses tells us of the curability of pulmonary consumption in the abstract, and indeed allows a favourable interpretation of the particular case within certain limits, yet they do not mark a stage in the disease whence no retrograde changes are to be feared.

Case ix. *Protracted Phthisis, with Chalky Expectoration.* I had occasion sometimes to see a gentleman who for some years kept consumption at bay by a residence at Madeira during the winter months. His health, such as it was, was purchased by the constant application of blisters to his chest, and the continual use of sedatives; and thus he continued for months or years, with only occasional attacks of irritation about the chest.

When I first saw him, after many years thus spent, there was no further disease of the lungs than was indicated by long expiration, with some dulness on percussion beneath both clavicles, and some smallish crepitation beneath the left. The expectoration showed nothing unusual then, but any great irritation about the chest was surely followed by expectoration of chalky masses.

When he returned to England next year, he had suffered much anxiety in the interval, and the physical signs of pulmonary disease had much extended themselves; and coincidently there had been an unusually abundant expectoration of chalky masses.

The next summer saw him restored to his usual health; but the accounts from Madeira during the following spring rendered his return to England a very doubtful matter. He had suffered a succession of inflammatory attacks, with expectoration of chalky masses, and occasional hæmoptysis. However, he rallied a little, and came. When I saw him after the voyage, he was very feeble; pulse always above 100; large crepitation, with more extended dulness on percussion, over the upper portion of the right lung, especially in front; great difficulty in expectoration, needing assistance from change of position.

The air of Reigate and St. Leonard's agreed with him much better than that of Brighton. The cough was kept in check by the cautious use of alkalies; and he returned to Madeira for the winter, stronger, but suffering from time to time from expectoration of chalky masses. In one of these attacks, he died suddenly of pulmonary hæmorrhage.

The details of this particular case may stand in the place of any more general remarks, for there is a strong family resemblance running through the whole class. Perhaps there is no form of pulmonary phthisis in which life is more protracted than this, and where the comforts and luxuries which wealth brings with it have a more direct influence in averting or deferring the ordinary effects of the disease. It is not by accident merely that the most characteristic examples of chronic phthisis are found in the richer classes. But there are conditions of disease against which wealth cannot purchase any protection, and a case of phthisis nursed and tended for years may suddenly be cut off by hæmoptysis. Fatal pulmonary hæmorrhage occurs sufficiently often in this form of disease to be regarded as one of its natural terminations; and it is a risk against which we should always be on our guard (in our prognosis, at least, if we can do nothing to prevent it), in connection either with a persistent cavity or with chalky expectoration.

The peculiar physical conditions in which the lungs are placed forbid us to consider an abscess of the lung (apart from its tubercular nature) in the same light as an abscess elsewhere. We cannot reasonably hope for success from the same means as we employ under other circumstances; the constant motion and constant tendency to retraction of the walls of the cavity are obstacles to success insuperable by ordinary means. And the danger of hæmorrhage from the surrounding structure is a danger peculiarly to be dreaded here, and most particularly, I believe, in cases which have made some progress towards repair. Just as peculiar is the influence of collapse of the lung by perforation of the pleura, an accident which the following details may serve to illustrate.

Case x. *Protracted Phthisis with Pneumo-thorax and Collapse of the Lung.* In January 1848, I saw a medical student suffering from a slight attack of pleurisy of the left side. And as he got better of the pleural affection, the local signs of tubercle displayed themselves beneath the clavicles, most distinctly beneath the right.

Towards the end of April, on repeating my examination of his chest, it appeared that there was still a small amount of fluid in the left side of the chest, as indicated by dull percussion, and impaired vocal vibration over the lower fifth behind. While beneath this clavicle abundant moist sounds, with increased vocal resonance, indicated that tubercle was being deposited and softening in that situation. I have no record of the condition of the right lung at this period.

I saw him again in October. He had gained in flesh and strength, though he had intermediately suffered several attacks of hæmoptysis, but he had never noticed any sudden pain in the chest, such as could allow one to assign a date to the state of things which auscultation now detected on the left side. This side was now generally quite loudly resonant to percussion. There was no proper respiratory murmur, only a few creaking or crepitating sounds here and there, no metallic or amphoric sounds. I thought he had pneumothorax, the opening into the air passages being at the time of this examination temporarily closed.

After three years I saw him again. He had spent the interval in wandering about the Continent. His medical history lay in a few words. Constant liability to feverish attacks, occasional hæmoptysis, and habitual thick mucous expectoration, were his chief symptoms. Careful diet, blisters, and cod's liver oil were his most successful remedies. On examining the chest, the left side appeared flattened; the left semi-circumference just below the mamma was 15·25 inches—the right was 16·75; on the right side the respiratory murmur was healthy, with no morbid sounds, and with good resonance on percussion; on the left side, the respiratory murmur was simply feeble in the upper third; it was metallic in the middle third, with an occasional splash most marked about the lower angle of the scapula; in the lower third, there was little audible save transmitted sounds, and the vocal vibration, elsewhere so distinct, was here quite wanting. And the results of percussion exactly corresponded to the auscultation; it was quite dull below; there was loud resonance over the middle third, subsiding again in the upper third to the normal tone.

The physical history of this case seems very clear. The poor sufferer had phthisis and pneumothorax. And probably the apex of the lung was adherent, while the lower part of the pleural cavity contained some fluid. I have not had an opportunity of examining his chest since; but I heard from him that he was still dragging on a painful existence a year after I had seen him.

Nor does the pathology of the case need any further explanation than what itself supplies. Indeed, were it so, I could do no better than transfer to these pages the observations of Dr. Stokes (*Diseases of the Chest* p. 531), on the retardation of the progress of tubercle by collapse of the lung. This is not, indeed, an unequivocal illustration of that principle; for the progress of the tubercle had been in some degree checked before the occurrence of pneumothorax. But, in its main features at least, it may be considered as such.

Before concluding, I would review in a few words the chief topics which have come under consideration. They may be summed under two heads, as relating to the prognosis and curability respectively of phthisis.

1. *Prognosis.* I believe that there are two forms under which tubercle may be deposited in the lungs, two anatomical types of pulmonary phthisis, according as the disease is limited to the apex or diffused more generally throughout the lung. And the prognosis is more favourable, *cæteris paribus*, according as the case approaches nearer to the first of these types. The prognosis, however, does not rest exclusively on the physical signs; separately, indeed, the constitutional symptoms have much more value than the local signs in the question of prognosis. But the two classes of signs taken together enhance each other's importance, and possess a value collectively which neither can separately lay claim to. Thus—to suppose extreme cases—a great degree of constitutional disturbance, with a hurried pulse and a loaded state of the urine, is of the most unfavourable import, though the local changes be seemingly very slight, more especially if they be diffused over a wide extent of the lungs. On the other hand, slight constitutional disturbance may justify us in entertaining a more hopeful view of a case, though the local signs point to an advanced stage of the disease, if these changes be limited to the apex.

2. *Curability of Phthisis.* Sharing fully in the abstract belief of the curability of phthisis, I share equally in the conviction of the very delicate nature of the evidence on which that belief

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rests. The more perfect the separation, the more completely is the proof of the previous existence of the disease removed. The more evident the physical or other signs, the less likely is reparation to ensue at all. It is only in the doubtful cases that there is much room for hope as the general rule; only in very exceptional cases is this hope realised.

Speaking from the clinical observation of phthisis; however quiet and tractable the disease may seem up to a certain point, still we always find that some obstacle prevents our quite removing the disease. It is betrayed, maybe, by none but curable symptoms. But we can get no further than the cure of these symptoms. And, without constant care, the disease will put on the ordinary character of phthisis, and other symptoms will develope themselves which we cannot cure.

If, resting on anatomical distinctions, we point to cavities where ulceration has been superseded by reparative action, or to harmless calcareous concretions replacing tubercular nodules, the difficulty meets us still. The very grounds on which we are arguing, show the incompleteness of the repair of the disease. The details I have given are but samples of many others, which each one from his own experience might supply, showing how far these conditions are from a cure. Nor can such a result, in the lowest practical sense of the word, be obtained even by the sacrifice of the organ affected, by collapse of the lung. We may set the tubercle at rest perhaps. We may even, under favourable circumstances, reduce the injured parts to a condition differing little from the results of ordinary disease. But the most gratifying results obtained in this way would fall very far short of perfect success. For even to heal the mischief already done to the lungs, could we do this much, were not enough to constitute a real cure in the majority of cases. For the pulmonary disease, in the majority of cases, is but a part of phthisis.

LETTERS AND COMMUNICATIONS.

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British Medical Journal.

SATURDAY, DECEMBER 25TH, 1858.

CRIMINAL RESPONSIBILITY OF THE INSANE.

THE trial of James Atkinson for the murder of his sweetheart, Mary Jane Scaife, again opens that much debated question of late—the criminal responsibility of the insane; although, in this instance, we do not see that the jury could have had much hesitation in finding their verdict of acquittal on the ground of insanity, which they did. Here we see a poor creature clearly an imbecile, goitered, and starved both in bodily and mental power, but possessing all the worst and most brutal passions of human nature in terrible perfection: this imbecile was proved to have come of a parentage, both paternal and maternal, saturated with insanity for generations. The counsel for the prisoner tells us that his brother was an idiot; his aunts were lunatics; that his father's brother was a furious lunatic; that his grandmother had brought lunacy into the family; that this malady was traceable to even more recent generations, and that they would find six or seven lunatics in the family *in every generation*—in the prisoner's own generation, in the father's, in his grandfather's, and even in his great-grandfather's generation. That this poor wretch, coming from such a stock, should have been sane, would have been the wonder; and his genealogical tree was enough to condemn him, almost irrespective of the character given him by those who had the misfortune to come in contact with him. "He had", said Dr. Forbes Winslow, one of the witnesses for the defence, "the peculiar slouching gait and attitudes of that class of people (subjects of dementia).... Had he met him in a room, he should have been much struck with his appearance." Dr. Caleb Williams had no doubt he was an imbecile. Mr. Kitching, another medical man, who had attended his family professionally for years, "classed him as an imperfect idiot and partial imbecile". The evidence of the lay witnesses for the defence all went to substantiate the imbecility of the prisoner; and that the judge took this view of the question, is evident from his charge. Under such circumstances, the counsel for the prosecution might, we think, have forgotten the traditional practice of the bar, and have respected the medical testimony. This was not to be, however. Mr. Price, the counsel for the prosecution, the "hired advocate", whose paid efforts, had they been successful, would have consigned this wretched irresponsible being to the scaffold, had the audacity to advise the jury "*to reject the testimony of a set of hired advocates in that profession, who went about to prove the theories of their own crotchety brains*". Fortunately, the medical witnesses who, in this case, brought their science to bear in order to save this poor creature from being judicially murdered—the fate to which the "hired advocate", Mr. Price, would have consigned him—do not require a defence at our hands; the profession knowing too well how to estimate such disreputable attacks of counsel.

We own, however, that we are greatly surprised that Mr. Anderson, the surgeon of York Gaol, whose experience of lunacy must be of a very limited nature, should have had the hardihood and the bad taste to abuse his medical brethren as he did. "Some four or five medical men in York" (this self-sufficient Mr. Anderson tells us) "have devoted their lives to the study of lunacy. He did not think that those gentlemen were better able to give an opinion on questions of lunacy than himself. Such gentlemen, from devoting themselves exclusively to one subject, were liable to be a little crotchety". In other words, according to Mr. Anderson, the less you have studied a question, the more valuable your opinion upon it! We wonder if the surgeon of the York Gaol holds the same opinion with respect to the various studies he undertook in order to obtain his diploma?

To leave these personalities, however, and to return to the more important public bearing of this case; how, we ask, are the public to be protected from men like Atkinson, who, when too late, are found to be irresponsible beings? There are thousands of James Atkinsons at present in this England of ours, enjoying all the privileges of sane men, many of whom are, in all probability, meditating crimes as atrocious as this murder. Is society, which is so afraid of "the crotchets of mad doctors", to wait patiently until these crimes are committed? We answer, No. The testimony that is so plentifully called forth to save the prisoner from the gallows, should not be wanting to save the victim from his bloody hand; and we predict that a few more such trials as these will bring the public mind to acquiesce in the opinion so long held by some of our leading alienist physicians—that the law should prevent the madman's hand from striking, instead of merely contenting itself with declaring it irresponsible when it has struck.

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