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## ON THE TREATMENT OF PLEURISY.

FROM DR. WATSON'S LECTURES AT KING'S COLLEGE, LONDON.

As to the *treatment* of pleurisy, you will have anticipated that in the outset of the disease we must have recourse to the lancet. I have stated more than once that bloodletting *tells* more, and is better borne, in inflammation of serous membranes, than in any other case. If you see the patient while the stitch in the side and the restrained and cautious respiration are present, you will bleed him, in the upright posture, from a large orifice, until the pain is relieved, and he can draw a full breath again with ease and satisfaction; or until he is about to faint. And if the pain and catch in the breathing should return, and the pulse continue firm and hard, you will bleed again in the same way; or cover the painful side with leeches; or abstract blood by the cupping-glass and scarificator. It is best to bleed fearlessly at first, and in proportion as you do so the chance will be diminished of a repetition of the bloodletting being needed. The blood, in pleuritis, is always deeply buffed and cupped.

Tartar emetic, which is so useful when the mucous membrane of the air-passages is inflamed, is *not* adapted to inflammation of the pleura. On the other hand, mercury, from its well-known power to check the effusion of coagulable lymph, is *especially* indicated. Of course it is to be given with a view to its specific effect on the system; *i. e.*, in equal doses repeated at frequent and equal intervals, and guarded by a small quantity of opium. And in very severe cases, or when the internal employment of mercury is in any way contra-indicated, recourse must be had to inunction of the linimentum hydrargyri, or of the strong mercurial ointment.

By the early and vigorous adoption of these measures, the inflammation may generally be subdued in no long time. If, though the fever diminish, there still be pain in any part of the chest, leeches may be again applied, or the part may be covered with a blister. I do not think a blister does any good—on the contrary, it is likely, by the additional irritation it causes, to do harm—while the inflammation is yet recent and active.

But though pain may have ceased, and no fever remains, and the patient is not conscious of much dyspnoea, there may be, and there often *will* be, evidence, not to be mistaken, of effusion into the cavity of the pleura. Dulness, I mean, on percussion, bronchial respiration, ægophony; and the object of our treatment is now to get rid of the fluid.

We seek to do so by keeping the patient on low diet. The more (says Broussais, with some quaintness), the more the patient eats, the sooner he will die. We pursue the same object by keeping his gums tender with mercury; by applying blisters one after another to the affected side; and by purgatives and diuretics. By keeping the vessels empty we facilitate, as much as in us lies, the absorption of the liquid contents of the pleura. A very good form of diuretic for this state of matters is a combination of squills, digitalis and mercury. Half a grain of digitalis, one grain of squills, and three or five grains of blue pill, repeated and continued according to the state of the mouth.

Under this kind of treatment the effused fluid will often be completely removed; and the chest restored to its former state. I last week dismissed a lad from the Hospital in whom all this took place.

But in other cases, though the fever and the inflammation are at an end, and absorption of the liquid takes place, the parts within the thorax do *not* revert to their original condition. This we know by that shrinking of its dimensions on the side affected, which was described in the last lecture. This shrinking and narrowing is the *necessary consequence* of the absorption of the liquid, *unless* the compressed lung dilates again in proportion as the fluid is taken up. In most cases of this kind the lung *cannot* rise; being bound down by thick and firm false membranes; and then the deformity is irremediable, and lasts for life. If the lung is completely emptied of air, and enveloped by strong bands of lymph, so that it is permanently unable to admit air again—in that case, as the bony framework of the thorax can yield to a certain extent only, there will always remain, I presume, some liquid in the pleural cavity. If, again, the lung recovers a part of its lost volume, and *meets* the contracting parietes of the chest, adhesion may take place, and the cavity of the pleura be obliterated by thick layers of false membrane. And other changes are apt to arise in the lymph which is adherent to the pleura in these cases of imperfect repair. Sometimes tubercles form in it. Sometimes ossific matter is deposited. I show you a fine specimen of this kind of ossification of the pleura. There is yet another supposable case: the investing adventitious membrane may be thin, and weak, and yielding; and though the lung may not expand to its full dimensions at first, it may gradually force its way against the binding power of the coagulable lymph, and then the external configuration of the chest may be restored, and the symmetry between the two sides return. That this sometimes takes place I cannot doubt; but I have only once met with a case in which the dwindling of the side was *entirely* recovered from. In May, 1834, I was asked to see a child four years old, who had had cough, and wasted to mere skin and bone, after scarlet fever. I found the whole of the right side of the chest perfectly dull on percussion, and no respiration could be heard on that side. He was taken by his parents into the country, and I did not see him again for some weeks. He then had ceased to cough, and, in a great measure, had regained his strength; but he presented, on the side which had been dull, the most marked and complete example I ever saw of the sinking in of the ribs, flattening and shrinking of the chest, and depression of the shoulder, which denote by-gone pleurisy and

diminished size of the lung. About a year from the occurrence of the original disease his father brought him to my house, that I might see the change which had again taken place. The boy was plump and rosy and in perfect health; the right side of the chest was as full and round as the other; the symmetry of the two sides was completely restored; the breathing perfect and natural; and the sound on percussion hollow. His father, to whom the former shrunk state of the side had been pointed out, told me that he had watched, with deep interest, the process of recovery, and that it had been very *gradual*. Whether after once having subsided, the ribs ever quite return to their natural position in the adult subject, I do not know. I have never seen that happen.

There are yet other cases in which the effusion continues and increases, and the side, instead of shrinking, enlarges; the functions of the lung on that side are entirely abolished; nay, the use of the remaining lung is greatly interfered with, by the pushing over of the mediastinum; and the patient is in imminent danger of suffocation. In such cases, whether the effusion has taken place rapidly or slowly—whether the disease has been acute or chronic pleurisy—we must relieve the oppressed lung by *letting the fluid out*—by tapping the thorax; and the sooner that is done, when such a state of things exists, the better.

The operation is not difficult or formidable; but a mistake in the diagnosis may be *very* formidable. I have heard of two instances, one in Scotland, and one in this town, in which the operation of paracentesis thoracis was determined on to relieve the oppression caused by empyema: but the opening was made on the wrong side; and the patient in three minutes was, in each case, a corpse. There was effusion, which had already put a stop to the play of one lung: and upon air being admitted to the surface of the other, it collapsed also, and immediate suffocation took place. I do not mention these mishaps to deter you from performing the operation. They both took place some years ago. Such a mistake would be unpardonable now. But I mention them to show the necessity of our being sure of our ground before we proceed to open the thorax of a living person. A surgeon told me very recently that with the sanction, and at the suggestion, of a physician, who understands auscultation exceedingly well, I believe, he passed a trocar into the chest of a patient; but no fluid followed, to the no small mortification of the physician. This proved to be a case of malignant disease of the lung; and fluid was let out afterwards by puncturing the thorax in another place, and much relief afforded; although, of course, the disease proved ultimately fatal. The surgeon informed me that he had suspected the true nature of the case, from observing a livid protrusion in front; which was, in fact, the specific disease making its way through.

You will take care, then, to survey the chest narrowly before you plunge a trocar into it. If you see by your eye, and ascertain by measurement, that one side is larger than the other; if the intercostal depressions be effaced on that side; if the whole surface affords a dull sound when percussed; if the side does not move at all, or scarcely moves during respiration; if no vibration can be felt on that side when the patient speaks; if no breathing can be heard in the corresponding lung; if the

heart be found beating in an unnatural place, down towards the left hypochondrium, or in the other direction on the right of the sternum; and if, at the same time, the other side of the chest moves freely, sounds resonantly, communicates a thrill to the hand while the patient converses, and is full of *puerile* respiration; then you may be sure that the larger side is distended with fluid.

But it does not follow that you should, therefore, open that side. The propriety of doing so will depend upon circumstances.

In my judgment, that operation ought never to be performed unless the life of the patient is, or seems to be, in jeopardy, from the continued presence of the liquid within the thorax.

Now life is plainly in jeopardy when the vital functions of the lungs, or of the heart, are greatly hindered; when symptoms present themselves of approaching death by apnoea, or by syncope. • If we discover no cause for these symptoms, except the increasing pressure of liquid pent up in the pleura, we are warranted in ascribing them to such pressure, and bound to act upon that persuasion. Whenever, with the physical signs of abundant effusion, we have great labor and distress of breathing, an anxious and livid aspect, a tendency to delirium—or extreme faintness, and a vanishing pulse—there is no time to be lost: it is our duty to propose and urge the mechanical removal of the pressure which must else be fatal.

Again, when the patient, without suffering much dyspnoea while he lies quiet, is yet evidently losing ground from day to day, and early death by asthenia appears, without the operation, to be inevitable; and when all other means for getting rid of the imprisoned liquid have failed; and when no other condition of disease, or of advanced age, exists to account for the progressive sinking: then also, in my opinion, the patient should not be denied the *chance* which the operation may afford.

Thirdly, whenever (no matter how we ascertain the fact) the effused liquid consists of *pus*, it should be let out.

In either of these three predicaments, and in no other, should we be justified (as I think) in making an opening into the living thorax.

But I wish to be understood as giving you simply the impression which my own experience has made upon my own mind. I know that some practitioners recommend the early employment of the trocar; while (they say) the false membranes, which are apt to prevent the collapsed lung from expanding again, are yet tender and unorganized. But surely we should risk much, and gain nothing, by admitting air into the pleura while the inflammation is still in progress. Most cases of mere pleurisy with effusion do well. The mortality from uncomplicated pleurisy is exceedingly small. It would, I fear, be vastly augmented if every patient having manifest effusion were to be tapped. The danger of the operation is this;—that it may, and probably will, induce suppuration, or cause the effused liquid to become putrid. Generally the effusion consists of serous fluid, which is at length spontaneously re-absorbed: the lung expands again, or the walls of the chest shrink inwards: and the ultimate state of such a patient is as good as it probably would be after a successful tapping.

To make assurance doubly sure, it is always right, before proceeding

to the operation of paracentesis, to adopt the expedient first suggested and adopted I believe by Dr. Thomas Davies, of trying the chest by means of a grooved needle; making a tentative exploration of the nature of its contents in that manner. The passage of this little instrument—like the dismissal of a pilot balloon—affords information which is useful in guiding the particulars of the subsequent operation. It not only ascertains that there really is liquid within the pleura, but it discovers the kind and quality, and exact place, of the liquid. If it be serous, it will flow readily along the groove, and trickle down the patient's side. If it be puriform and thick, it will not exude so freely, but a drop or two will probably be visible at the external orifice; and when the needle is withdrawn, its groove will be found to contain pus. In the former case, it is possible that there may be no false membranes; in the latter they are likely to be thick. You would use a larger trocar to evacuate the thicker fluid.

The puncture thus made is quite harmless; and inflicts very trifling pain. Dr. Davies gives this useful piece of advice in respect to the trocar, that its point should be *sharp*: for otherwise, after the serous membrane has been penetrated, if there happen to be thick, tough layers of coagulable lymph, not very closely attached to the costal pleura, they may be driven before the instrument, and so the liquid will not be reached, but the operator will be perplexed and baffled.

[To be continued.]

## A GLANCE AT MEDICINE IN PHILADELPHIA.—NO. II.

*To the Editor of the Boston Medical and Surgical Journal.*

ON Wednesday, 27th October, 1841, I took up my residence for the first time in the City of Brotherly Love, at a private boarding house, corner of Eighth and Walnut. Although I was furnished with several introductory notes in New York, I first sought some of my invalid acquaintances, and through them their family physicians. As my *real* object, however, in visiting the city was the acquisition of medical science, whether gained in private conversations, lectures, hospitals, libraries, museums or medical clubs, I soon abandoned all formality, and without hesitation made my own introduction when it was not perfectly convenient to obtain the medium of others. As my name and residence had become generally known to the physicians through the frequent visits of their patients to the Springs, credence was readily obtained, and thus needless formality avoided. During an abode of three weeks, I was made unceremoniously a guest in the families of several, and at many of their private libraries and offices, and was admitted to various hospitals and to courses of public and private medical instruction. I was also politely invited to several medical and scientific clubs, of which it may be proper to speak in this place.

All the MEDICAL CLUBS I attended were very similar. Some dozen medical men associate and meet once a week at each others' houses in rotation, after the labors of the day are over. The interview occupies say