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CLINICAL LECTURES

ON THE DIAGNOSIS OF

EXTRAPELVIC TUMOURS OF THE ABDOMEN.

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(Reported by W. RICHARDSON GOWER, ESQ.)

LECTURE I.

Methods of Clinical Observation—Physical Examination of the Abdomen—Elements of Diagnosis—Illustrative Cases.

THE aim, gentlemen, of clinical teaching is to make the student practically acquainted with medicine. You are elsewhere taught the theory of medicine; here we strive to make you practitioners. In the course of time, every one who practises his profession acquires a certain amount of individual knowledge—personal knowledge; *i. e.*, gains at the bedside a certain knowledge for himself. Knowledge so gained is experience. We say, "A. is a more experienced man than B."—meaning that A. has more knowledge acquired at the bedside than has B. Now, the amount and worth of the knowledge so gained is not dependent on the number of sick people of whom A. or B. has had the charge. There are men who have had a great deal of practice, and are still inexperienced. They have failed to acquire, from the cases they have had under their care, from the practice they have had, any great amount of certain personal knowledge. On the other hand, there are men who have had the care of comparatively few cases, and yet have learned so much practically from those cases as to be, comparatively speaking, experienced men.

There is a great danger in young men having the care of many patients before they have acquired a certain acquaintance with the general doctrines and principles of medicine, and been well trained to observe at the bedside. Because they have treated many people, and comparatively few of their patients have died, they are satisfied with their imperfect knowledge, speaking confidently of the results of their experience, and of the cures they have effected. In truth, such men mistake self-deception for experience.

Now, clinical teaching should enable the student to start from a higher point of experience than he could attain by his unaided powers. The knowledge which the teacher has acquired by the practice of his profession should be, to a considerable extent, imparted to the scholar. The clinical scholar should be taught by his master to see with his eyes, to touch with his hands, to hear with his ears, to reason with his brain; he should, in fact, be put in possession of that practical knowledge which, in long time, the master has acquired for himself; and should be, by his master's aid, possessed of the method by which practical conclusions, from facts observed, are to be drawn. At the end of his pupil career then, you will see, the clinical scholar should start from a vantage ground; and not only should he start from the practical position his teacher has gained, but should also have been trained to use his senses so as to gather real facts for himself, and to use his reason so as to draw sound conclusions, to make every case which he subsequently sees add to his real practical knowledge; when he attends a case, even though it be of the commonest disease, he not only sees the case, but he learns something, adds something to his experience, from it. He has learned to see without his master's spectacles, and to draw conclusions without the aid of his master's brain. Some men have a great store of practical knowledge, though they cannot impart it to others. They cannot impart it for this reason; namely, they have never analysed the process by which they gained

it. They have made the conclusion part of themselves; the steps by which they reached that conclusion have long since escaped them, if ever they were cognisant of the separate steps. A very able physician, from whom I learned much, was going round the hospital when I was here a comparatively young man, in secondary charge of patients; pointing to a woman who lay on a bed very ill, he said, "Take care of that woman; her back will slough". I asked, "Why will her back slough?" "I don't know", was the answer, "but she looks as if it would". Now that man had practical knowledge; but he could not impart to his scholar the grounds for his experience or acquired knowledge. He could not analyse the mental process by which he had arrived at the conclusion that the woman's back would slough. As the woman's back did slough, I was much impressed by his remark; but I still wanted to know why, and I analysed the process, by which I subsequently came to the conclusion, that the backs of such like people were likely to slough. Though the patient was young, she was fat, and therefore heavy; she was flabby and anæmic, and therefore of low vital resisting power; she was ill from an illness of a low type, in which sloughing is common; she was lethargic in habit, phlegmatic in temperament, and therefore little likely to suffer from a little pain; sure to lie long on her back, therefore she was likely to slough. He said to me, such looking people do slough; but could not make clear to me the separate links in the chain of evidence which led him to his conclusion. Now, I desire, as one of your clinical teachers, that you and I should note in every case the separate steps by which we reach the top stone of our conclusions—at least, so often as this is possible, which it is not always.

There are two ways of teaching clinically, and we shall follow both. One at the bedside; one by special lectures, given either in the ward, in the dead-house, or in this theatre.

Clinical instruction must be given at the bedside. There you must note the aspect of the patient; learn to use your ears, your fingers, your eyes, your nose, all the senses, and all the sense that you have. The clinical teacher must tell you what you are to feel, hear, see, and smell; how you are to use your senses that they may convey to you real knowledge; and he must train you at the bedside to note the daily variations in the symptoms, and tell you what those variations signify—how to draw conclusions from the facts you have noted. He tells you what to observe; he teaches you how to observe; and he explains to you the signification of the facts you have observed.

In clinical lectures, we review the observations we have made from time to time at the bedside; we weigh the facts noted in the wards; we consider individual cases at length, and, by the progress of the case, or by the facts revealed to us in the dead-house, we verify our first opinions, or we discover our mistakes; and, in the last case, we learn why we were wrong, and so add to our experience, and avoid like mistakes on future occasions: we group cases of the same disease, and note in what points they agree, and how they differ, and endeavour to ascertain the causes of their differences; or we abstract single symptoms present in a number of different diseases, and consider that special symptom, and endeavour to show why it is common to several pathological lesions—for example, jaundice, convulsions, delirium. Again, in the lecture-room, we bring together remarks made in the course of clinical instruction, arranging them in a more or less systematic manner. And it matters little though one repeats here what has been said at the bedside. It is a good thing for the student if his clinical teacher says the same thing in new words again and again; repetition is the soul of teaching, and especially of clinical teaching. With reference to pathological anatomy, to chemical research, to microscopical observations, I shall keep to such points only as I hold to be of practical importance—such, that is to say, as I myself use in daily practice.

To-day, I shall say a few words about the Diagnosis of Abdominal Tumours.

When engaged in practice you will often be consulted because the patient has a large abdomen. Do not forget that a little child in health should have a big belly. It has often happened to me to have a perfectly healthy child brought to me to be treated because its mother thought its belly large. Those of you who are fond of art may have

noticed that the good artist, when painting a little naked child, puts it in such a position as to hide the protuberance of its belly, which is not a pretty object; if necessary to represent it in a position in which the belly is seen, then, as in some of Raffael's pictures, you see that the child has a big belly. When an artist paints a naked child and makes a pretty object of its abdomen, you know that he has made a mistake; he has sketched his ideal of what a child should be, and not a child of nature's making. The little child's abdomen is large because its abdominal and intestinal muscles are weak, its pelvis is shallow and small, its diaphragm flat, and its liver and spleen large; and because much flatus is formed in its small intestines, especially during the digestive process. Again, remember that fat-forming persons, at all advanced in life, have big bellies. The large abdomen here is due to fat upon the parietes, fat in the mesentery, omentum, etc.; and again, people whose abdominal parietes are thickly coated with fat, and who have a large quantity of fat in their abdomen, are very liable to have accumulation of flatus in their intestines. Enlargement of the abdomen, due to flatus, increases and decreases suddenly. The size of the abdomen varies from day to day, and at different times of the day. No other enlargements of the abdomen thus vary in degree.

A word here by way of caution. Persons will consult you, saying—"I have been growing bigger lately," and referring to their increase in size as if they attached little importance to it. Ladies of middle age are especially likely thus to mislead you; though very anxious in mind because of the increase in size, they do not like to admit even to you, their doctor, that they are anxious or care in the least about it. Do not be misled by this seeming indifference into giving an opinion without an opportunity being afforded to you of forming a correct opinion by examination. It is not long since that a lady, consulting me, referred, as if incidentally, to her increase in size, saying—"It is really of no consequence, I suppose. The swelling is sometimes trifling, and then considerable." "It may be, and probably is, of no moment," I replied; "but I cannot say without examining." "Oh! I don't think that is necessary," she said. In a few days, however, she came to me again, and said—"Well, I think I should like to be quite sure." I found a tumour of moderate size rising out of the pelvis. Now this lady would have liked me to give her a favourable opinion without examining. I should have pleased her by such opinion for the moment, but ultimately I should have had great discredit.

Remember that many more mistakes are made from the practitioner not examining, than from his not knowing. The great distension complained of by the patient may be the immediate consequence of accumulation of air in the intestines, and yet the patient be the subject of abdominal tumour. It was so in the lady to whose case I have just referred. A moderately sized tumour in the abdomen may cause great discomfort when the patient has, in addition, an accumulation of flatus. When the flatus disperses, all discomfort ceases. The distension comes and goes quickly, which no other distension than that due to flatus does; and, the great swelling thus coming and going, you may be led to overlook a serious disease. It may be that the patient would not have discomfort; would not notice any increase in size unless she had the solid growth and the accumulation of air. Her trouble is due to the growth *plus* the flatus. Get rid of the flatus, and the patient is free from present suffering; and so for a while, unless you carefully examine the patient, you may be in error as to the disease.

Speaking generally, we may say abnormally large abdomens are due to accumulations of air; to excess of fat; to the presence of fluid; or to solid tumours. Now, supposing that you are afforded an opportunity of examining the abdomen, of passing your hand over it, so as to ascertain whether there is anything there which there ought not to be, in what position do you place the patient while making the necessary examination? I see some of you merely raise the legs; you let the patient be in any way on his back, only you carefully draw up his knees. But consider what is the great obstacle to your examination of the abdomen—supposing the patient to be neither very fat nor very tender. The great obstacle is muscular rigidity. The recti, especially, are the great opponents to a physical examination of the abdomen; and by drawing up the legs, you relax the recti very little indeed. But if you place the patient on his back, with the shoulders somewhat raised, and the back of his head propped up till the chin falls on the top of the sternum, you will find that the abdominal muscles are relaxed considerably; then bend the legs on the abdomen, so as to relax the fasciæ, and perhaps also some of the abdominal muscles a little. It is better when you flex the thighs on the abdomen, to let the feet rest on their soles, and to have the knees supported by the hands of an assistant.

Having made the abdominal wall as lax as possible by position, talk to the patient about some interesting subject, and so engage his attention that he may not, by voluntary action of the muscles, resist your manipulations. And if you cannot divert a patient's attention, make

him count, make him count up to a hundred, and then, when he has counted as far as he can without drawing in his breath, having kept his muscles tight all the time, he takes one deep inspiration, and while he is doing that, and the muscles are relaxed, you put your hand well down and keep it down. By giving to the parts under the hand a rolling motion, you often can get deeper than you would by simply forcing the hand downwards. You have thus gained a certain point, and at the next pause your hand will go a little nearer to the spine, and so on till you have thoroughly examined the deeper parts. All these means failing, it may be necessary, but it is very rarely so in practice, to put the patient under chloroform.

Now and then a portion of contracted rectus is mistaken for an abdominal tumour. It is not long since I saw a case of this kind. The patient, an old man, was very ill and greatly emaciated. It was feared that he was suffering from malignant disease, and my attention was directed to what it was supposed might be a tumour in the region of the pylorus. Remembering the possibility of mistaking the upper division of the rectus for an internal tumour, I soon found that this body was exactly in the situation of the upper division of the rectus; that I could not find any other upper division of the rectus on that side; that I could just get my finger under the outer border, and that by making the man raise himself in bed I could feel it contract and grow thicker. I thus satisfied myself that the mass, about which the question of malignant tumour was asked, was really the upper division of the rectus. The progress of the case proved the truth of the opinion. Again, it was this morning only I saw a gentleman who was supposed to be suffering from distension of the gall-bladder. The supposed gall-bladder was proved by such an examination as I have just described to you, to be the upper division of the right rectus, somewhat larger than usual, and larger on the right than on the left side; the difference in the size of the upper portion of the right and left rectus led to the error in both cases. This enlargement is more common on the right than on the left side. Supposing that you have relaxed, by position, etc., the abdominal walls; that you have passed your hand carefully over the whole abdomen, and have felt in it a body which you think should not be there, the first question you ask yourself should be: "Is this tumour due to one of the organs of the abdomen more easily perceptible to touch than usual, one of those organs misplaced, or one of those organs increased in size from disease?" To answer this question, and to determine what organ it is which forms the tumour, you should first endeavour to ascertain whether or not the tumour takes its origin in the pelvis. "Can you pass your hand between the solid body and the brim of the pelvis?" If a person be not very fat and you have relaxed the abdominal muscles, you can very commonly pass your hand back far enough to feel the pulsations of the aorta over the lower part of the spine just where the vessel bifurcates; and this can be done when a tumour, formed by an enlarged extrapelvic viscus, occupies a great part of the abdomen. Thus you can separate, in the great majority of cases with facility, the tumours which arise within the pelvis from those that have their origin above it; for remember, that tumours due to disease of organs placed above the pelvis do not pass down into the pelvis; and, though those that have a pelvic origin come up into the abdomen, they do not lose their pelvic connections; so that, in the one case, you pass your hand well back till you feel the spine and almost the brim of the pelvis, and you satisfy yourself that the tumour is above that; or, on the other hand, you feel that though the bulk is above, yet there is a connection with something intrapelvic. That is the first thing I do in examining a patient with an abdominal tumour. Supposing you are still in doubt, the use of the catheter and a vaginal or rectal examination will rarely leave any doubt as to the pelvic or extrapelvic origin of the tumour. I shall direct your attention to this point again when I am speaking of tumours due to increase in size of the spleen.

We will suppose that you determine, by the manipulations I have mentioned, that the tumour is not pelvic in its origin, *i.e.*, that it is not uterine, not ovarian, not connected with the bladder. These come, you know, into other departments of medicine. But let me remind you that you may be consulted by a patient suffering from what he supposes to be an abdominal tumour, which supposed tumour is merely an over-distended bladder. I have twice been consulted by men whose sole disease was distended bladder. Both came from the country to see me for supposed abdominal tumour, and both were cured, I was informed, by the use of the catheter only. It is especially to the diagnosis of tumours of the abdomen formed by the organs situate above the brim of the pelvis, that I propose to-day and in the next few lectures to direct your attention: to the diagnosis, that is to say, of tumours formed by enlargement of the liver, the spleen, the kidneys, the suprarenal capsules, the pancreas, and the lymphatic glands, and by dilatation of the gall-bladder, and of a circumscribed portion of the aorta.

First, I shall speak of the subject generally, endeavouring merely to

make you understand how you are to determine that the tumour is an enlarged liver, spleen, etc.; and subsequently teach you how to distinguish from each other the special diseases of the several organs which cause their enlargement. I shall illustrate this subject by notes of special cases.

In regard of the diagnosis of an abdominal tumour originating above the brim of the pelvis, you first ascertain the position it occupies—*i. e.*, its seat in relation to the normal position of the several abdominal viscera. Be sure to note the influence of the respiratory movements on its position. In the woman with an enlarged spleen now in the ward, you have observed how decidedly the position of the tumour alters with the movements of respiration. The spleen, lying in contact with the diaphragm, descends with each inspiration, and ascends with each expiration. The liver also, in consequence of its relation in position to the diaphragm, rises and falls with each rise and fall of the diaphragm. The position of the kidneys is more changed by respiration than you would expect. When about to ascertain the size of the kidneys by palpation, you make the patient inspire deeply, make him cough two or three times, and then take in a deep breath; and, in a large number of cases, the kidneys will lie lower than they did; not much lower, it is true, but still so much lower as to make a perceptible difference—enough, it may be, to enable you to feel distinctly what you were unable to touch before. The right kidney is more depressed during deep inspiration than is the left, probably from its relation to the liver. The kidney does not rise at once when the diaphragm ascends, as the liver and spleen do. The ascent of the kidney is effected either by the force of your subsequent manipulations, or by the pressure of the surrounding parts, and the resilience of the tissues in which it is embedded; and, when its ascent is due to the latter cause, it rises slowly.

The position of an aneurism of the abdominal aorta, of tumours of the stomach, colon, mesentery, omentum, or the glands, is not affected, or, if at all, in the most trifling degree, by the respiratory movements.

Only yesterday morning, a medical friend brought an obscure case to me for an opinion. The man was supposed to be suffering from malignant disease. A tumour could be just felt in the left hypochondriac region. The question put to me was, "What is that tumour? Is it in stomach, colon, omentum?" etc. Now, the tumour ascended and descended so decidedly with the respiratory movements, that I said to myself, "This cannot be stomach, omentum, or colon. Tumours connected with those organs do not thus rise and fall with the diaphragm. The only part in this situation thus affected by respiration is the spleen." It was a deformed lump, which, by the touch, one could not have felt sure to be the spleen; but, having regard to the situation, and to the degree in which its position was modified by respiration, the diagnosis at which I arrived was, I have no doubt, correct.

As the ascent and descent of the liver, spleen, etc., during respiration, depend on the movements of the diaphragm, you must not forget that any disease which paralyzes its action, on the right or left side, will prevent the respiratory ascent and descent of the liver, spleen, etc.: *e. g.*, inflammation of the diaphragmatic peritoneum or pleura; cancerous infiltration of the diaphragm.

We will first consider, with reference to their diagnosis generally, abdominal tumours due to abnormalities in position, form, or tissue, of the liver.

In health, the liver extends to from one to two fingers' breadth below the nipple. The upper border is to be made out by percussion; and a little below the nipple is the spot at which you commonly find a certain amount of dullness on deep percussion. The liver being of its natural size, and in its natural position, the dullness on percussion passes downwards in the nipple-line* to the margin of the thorax, and may extend, in health, to a finger's breadth or a finger's breadth and a half below the margin. In the middle line, the liver reaches, it is often said, to halfway between the ensiform cartilage and the umbilicus; but, really, the lower edge of the organ is decidedly nearer to the ensiform cartilage than it is to the umbilicus.

The less the circumference of the lower part of the thorax, the more arched is the diaphragm, and, consequently, the more vertical is the position of the liver; the greater must be the extent of dullness from above downwards; the longer, that is to say, is the line of vertical dullness. About one-third of the liver is overlapped by the lung; for, the lung being healthy, a portion lies between the arch of the diaphragm and the outer wall of the thorax.

It is important to bear in mind that, although there is dullness on percussion over the liver, and that the dullness is greater the nearer you approach to the margin of the thorax, yet that every where, the liver and lungs being healthy, there is a certain amount of resilience of the thoracic parietes covering the liver on percussion, perceptible to the hand of the observer. You must, at the bedside, make yourselves practically acquainted with this perceptible-to-touch resilience, and know,

from your own observation, that in health there is, as I now tell you, a certain amount of elasticity elicited by percussion even over the whole of the liver.

If the liver be enlarged, as in extreme congestion, albuminoid disease, cancer, hydatids, etc., it may, when it projects very little below the margin of the thorax, come too closely into contact with the chest-walls. When it does this, it diminishes the resilience of the parietes, damps their vibrations. On percussion, you feel a sense of resistance, and a want of elastic resilience which is not felt in health. Its projection below the margin of the thorax may be trifling, and still the liver may be so much enlarged as to increase very considerably the sense of resistance, to diminish notably the elastic resilience of those parts of the chest-wall which cover it. Whenever this loss of resilience is perceptible, it is evidence that the liver is too closely in contact with the walls.

In health, the margin of the liver cannot be distinctly felt, even though it be proved by gentle percussion to be a little below the border of the thorax. In some cases, you may perhaps be able just to feel a something which you think is the edge of the liver; but you are conscious that you are not sure of it. Your fingers do not come against a positively resisting substance. If the liver can be distinctly felt, you may be sure there is something wrong; there is disease. This is a point of practical importance. When attempting to ascertain the lower border of the liver by palpation, you press your hand on the hepatic region, and then pass it downwards, depressing the parietes till you reach a spot where there is a marked diminution of resistance. The solid liver gives a sense of resistance to your hand. The air-containing intestines offer very little resistance. When the sense of resistance ceases, your hand is below the margin of the liver. Now pass the hand upwards, with its outer edge toward the liver; at the same time keeping the hand on as low a level, with regard to the abdominal surface, as possible, till you come to something which offers resistance; and then you will feel the border of your hand ride over the margin of the liver. This is the best mode, at least in the majority of cases, of discovering the lower edge of the liver. There is less resistance to your flat hand than there would be to the tips of your fingers; and, by the outer margin of your hand, you come into contact with a large part of the margin of the liver at the same instant.

When the liver is enlarged, you determine by percussion its upper limit; by the sense of resistance on percussion of the chest-walls, how closely it lies in contact with them; by palpation, if the organ be firmer than natural; and by percussion, if its consistence be natural at its lower border. At the same time that you are defining the lower border by palpation, you appreciate the degree of resistance that the liver offers, how hard and how elastic it is; at the same time, you note whether the margin is rounded or sharp, even or nodular; having fixed these points in regard of the margin of the organ, you pass your hand over so much of the upper surface as lies below the margin of the thorax, and note its characters, especially observing its hardness, and if it be smooth or nodular. There is, in reference to this last point, a source of fallacy, against which be on your guard. Some portion of the abdominal muscles lie over the liver, and the little irregularities of the muscles may be mistaken for irregularities of the surface of the liver.

The liver may be of natural size but displaced downwards, depressed so far into the abdomen as to form a veritable abdominal tumour. Displacement to a moderate extent downwards is very common, and considerable displacement downwards is common. Do not forget this. I remember a case illustrating the importance of remembering it, which I saw when first I was physician to the hospital. There was evidently a number of things the matter with the man, but there was a question about this, and a question about that. The only point,—I tell you to warn you from the mistake I made,—the only point about which I felt sure was, that his liver was enlarged. The man died, and the only thing that was not there was enlargement of his liver. The liver was of natural size, but it was displaced by the enlargement of an organ which is not usually mentioned as a cause of displacement of the liver, but is a common cause of its displacement, I mean a dilated heart. There is a man in the ward now whose liver is displaced downwards by a dilated heart. He has no fluid in his pleura, nothing in his lung; the greatly dilated heart pushes his liver downwards. When the liver is considerably displaced, and the patient is at all thin, you may see, especially during an inspiration, as you do in the man now in the ward, the upper rounded border of the liver. This is, I think, decisive evidence of displacement of the liver. Had I known this, and looked for it in the case I have just mentioned, I should not have fallen into the mistake.

The causes of displacement of the liver downwards are various. I will enumerate the commonest. A rickety deformity of the thorax, so common in little children. Large-lunged emphysema is a very common cause of a moderate degree of displacement. Fluid, with or without

* By nipple-line is meant a line drawn vertically downward from the nipple.

air, in the pleura, is a common cause of considerable displacement of the liver. Then, also, as a common cause, we have a dilated heart; and, less common, fluid in the pericardium. Tumours of various kinds between the liver and the diaphragm, in the substance of the diaphragm, and between the diaphragm and the lung, are still less common causes of displacement downwards of the liver.

CLINICAL LECTURE

ON

PLEURISY WITH EFFUSION IN CHILDREN; DIS- PLACEMENT OF THE HEART; EMPYEMA "NECESSITATIS"; SUPERFICIAL TUMOUR; RECOVERY.

By WILLIAM MOORE, M.D. Dub. Univ.,

King's Professor of the Practice of Medicine; Physician to Sir Patrick Dun's Hospital; etc.

GENTLEMEN,—The case I am about to bring under your notice on the present occasion is that of the girl Isabella G., aged 10 years, at present in the hospital. It is about three months since this child was first brought to me for advice from a remote part of the country. Her condition at that time was as follows. She was pale, spanæmic, and dejected, having wholly lost that look of vivacity you expect to see in a child of her years. On making the least exertion, her respiration became very hurried; and she had been in this state for at least six weeks before I saw her. Still she never complained of pain in the side, or of acute symptoms of any kind. Now, the aspect of the child and the dyspnoea at once directed my attention to the condition of the chest; and, on stripping the little patient, I found manifest enlargement of the entire left side, from the clavicle in front and scapular ridge behind down to the base. Over this entire side, vocal vibration was absent; and respiration, distinct at the top, was inaudible inferiorly; and the heart was displaced to the right of the sternum. Such, in general terms, was the child's condition about the middle of September last; and, as pleurisy with effusion had not been suspected—no doubt owing to its very insidious advent—the probability is, that the left pleural cavity was filling with fluid for a month or six weeks before the child was brought to me for advice.

The treatment adopted was the syrup of iodide of iron, ten drops three times a day. Repeated blisters were applied over the left side, which was afterwards painted with a strong solution of tincture of iodine. By these means, the fluid gradually and steadily disappeared; the child regained her rosy colour and sprightliness; and she could run and play about without the breathing being affected. Simultaneously, however, with the exhibition of this treatment, a small abscess pointed under the left nipple, between the sixth and seventh ribs, and gave vent to a steady though not very copious discharge.

I then lost sight of the case till the 20th of the present month, when the child was again brought to me, apparently in rude health. Her colour was good; there was no distress of respiration; and she looked, on the whole, fat and well. Certainly, her general condition was incompatible with fluid in the pleural cavity, at least to any extent. On stripping the child, a circumscribed tumour without pulsation, of about the size and shape of a goose-egg, occupied the lateral and posterior portion of the left side. There was still appreciable dulness over the left side, and a manifest dipping under the left clavicle, and flattening of the left anterior half of the chest generally; and the left nipple was on a lower plane than the right. As the tumour, oval in shape, and placed transversely, occupied the lower lateral and posterior portion of the left side, we were not enabled to detect any deformity at the base of this side, if it did exist. Vocal vibration could be felt over the left side till we came upon this circumscribed tumour, where it was lost. Respiration was also audible over the same region, but inaudible over the tumour. The heart remained vertically in the mesian line; and the left half of the præcordial region was more resonant than it would have been had the heart occupied its normal position. The external opening under the left nipple was not pervious. These symptoms and physical signs coexisted with a pulse, temperature, and excreta, all healthy.

I have already told you that the generally improved appearance of this little patient contraindicated the presence of pleural effusion. Still you may say, How is the displacement of the heart, and the appreciable dulness on percussion over the left side, and the presence of this large circumscribed tumour, to be explained? Well, as regards the displacement of the heart, in the early stage of this case this viscus was pushed to the right of the sternum. It has receded, no doubt, but not to its normal position, as the apex-beat and the comparative resonance on percussion over the left half of the inframammary region clearly

prove; the latter physical sign demonstrating, at the same time, that it is not to the presence of fluid that the cardiac displacement is due. To what, then, is it due? Most probably to pleuritic adhesions, which may retain it there for life.

We next have to account for the slight dulness on percussion over the superior portions of the left side, and the flattening of the left anterior half of the chest, amounting to concavity under the left clavicle. Now, the most usual agent in causing contraction and depression after pleurisy is the adhesive matter which has been poured out during the attack. This, coupled with the mechanical pressure exerted on the lung from the fluid in the pleura (which, in this case, was probably of some months' duration), has tended to diminish the size of the viscus; and the thickened condition of the pleura, acting as a kind of capsule, is more than a match for the expansive influence of inspiration. Hence we have the lung diminished from pressure, the pulmonary pleura thickened, with costo-pulmonary pleural adhesions, all tending to account for the flattening and concavity of the side, the dulness on percussion, and the diminished vocal vibration. However, as our patient is young, and the tissues relatively more elastic, it is to be hoped—indeed, I have every confidence—that the inspiratory force will eventually gain the day, by dilating the lung, and restoring it, if not wholly, at least to a great extent, to its normal area, more especially as there is no spinal deformity.

How is the presence of this large tumour at the base of the left side to be explained? We have already said that an "empyema necessitatis" was established in this case; by which we mean that an external opening spontaneously formed under the left nipple, giving vent to a continued discharge, which, in a circuitous way, no doubt, materially assisted in draining the pleural cavity. This external opening became impervious from some cause; and the fluid having percolated out of the pleural cavity into the more superficial structures, and its external vent being thus interrupted, and there being no direct opening by which it could recede into the pleural cavity, it has become thus circumscribed and localised, in the comparatively superficial manner which you see, at the base of the left side. Our first object was to establish the external communication, which was done by the application of hot poultices; and the result is, that the tumour is gradually becoming flatter and disappearing; but, should this prove a tardy process, the introduction of a drainage-tube might be advisable. The child is taking ten-drop doses of the syrup of the iodide of iron three times a day; and the tumour is painted with a concentrated solution of iodine.

This case exemplifies the latent manner in which pleurisy with effusion may supervene: no fever, no pain, no cough, no symptom of its occurrence beyond a languid, colourless expression, accompanied with dyspnoea on making the least exertion. Now, of the various modes by which pleuritic effusions are removed, *ceteris paribus*, we must regard the means set up in this case as favourable. It is certainly more to be desired than the establishment of a direct communication between the bronchial tubes and pleural cavity, which occurrence is explained by the inelastic fluid keeping up a continual pressure against pleuritic adhesions; these adhesions being usually more capable of resistance than the lung itself, it gives way, and the fluid is poured directly into the bronchial tubes. Of these two means, you will readily see, the external fistula is to be preferred to the internal, as the occurrence of the latter establishes pneumothorax. But a more salutary means of removing pleural effusions than either of the afore-mentioned, is to be found in the reciprocal action which sets up between the serous and mucous membranes, exemplified in the establishment of profuse expectoration without any symptom or physical sign of a fistulous opening having been established. This reciprocal action, first described by the late Dr. Greene of this city, has now become well established; and even reciprocal action between pulmonary and abdominal membranes is proved by the setting up of diarrhoea, and the simultaneous disappearance of pleural effusions. Further still, the skin and kidneys, in many instances, seem as if they specially took on vicarious action for the removal of pleural and pericardial effusions.

And now, gentlemen, with respect to the treatment of this latent sub-acute pleurisy, with copious effusion, occurring, as it usually does, in relaxed and spanæmic constitutions, antiphlogistic or heroic measures of any kind are not admissible. If mercury be thought advisable, the red iodide or corrosive sublimate, in doses varying from one-sixteenth to one-thirty-secondth of a grain, according to the age of the patient, combined with bark, may be tried; but, in the great majority of cases, the iodide of potash or soda will be more suitable; and still more suitable (as almost all these patients are manifestly spanæmic) will be found the preparation we have employed in this case, and with such good results; viz., the syrup of the iodide of iron. This, combined with the application of blisters or a strong tincture of iodine, will usually be all the pharmacological means required; good food, pure air, and cleanliness, will do the rest. Unless tuberculosis be in the background, pleurisy with effusion in children is usually a benign disease.