ON CREPITUS AFTER PLEURISY.

By RICHARD CHAMBERS, M.D., Physician to the Essex and Colchester Hospital.

I STATED, in a former communication, that the co-existence of dulness, which has been put forward by Dr. Ward as an important aid in the diagnosis of this sign, was of no practical value, as the crepitus is audible in many cases prior to the total absorption of the fluid, where dulness necessarily exists, as it does in cases of contraction of the side, where you frequently hear the crepitus.

I also stated, that I invariably found dulness after an attack of pleuritis.

In the third number of *THE LANCET*, Dr. Ward has replied to my remarks, and I feel it necessary to quote the following passage from his letter, which is, in fact, the substance of the whole.

"Now, if by the word *after*" (Dr. Ward has italicized it) "Dr. Chambers means, after the absorption of effusion, and the organization of the lymph, I cannot agree with him; for the small additional thickness of the walls of the chest, produced by a layer of lymph, would be quite inadequate to destroy the resonance of the lung beneath, if this latter retained or had resumed its healthy spongy condition. If, again, Dr. Chambers means *after* part of the fluid has been absorbed, no doubt dulness will be present in this case as high as the level of the fluid, and will thus assist in the diagnosis. But surely Dr. Chambers cannot mean to assert that crepitus can be heard below this level, and through the layer of fluid interposed between the lung and the walls of the chest, as seems to be implied by the assertion, 'prior to the total absorption of the fluid.' Even in the last case proposed—viz., 'contraction of the affected side,' dulness here, also, will aid in the diagnosis, by being proportionate to the extent and degree of the contraction. Not that I assert that dulness will of itself indicate the cause of the crepitus in the cases in question, but I urge the necessity of attention to this sign, *because mere adhesions will not produce dulness*; (the italics are mine;) if they did so, we should possess a ready diagnostic sign of their presence,—a discovery to which no writer has hitherto, I believe, laid claim."

Had I not known Dr. Ward's labours in the field of practical medicine, I should have been disposed to doubt if the writer of the above remarks had ever seen a case of pleurisy, the reasoning is so purely theoretical, the views so different from those entertained by the highest authorities on thoracic disease. Let me refer the reader to the line I have marked in italics, and ask him to contrast it with the following extract from the second volume of Dr. Craigie's "*Practice of Physic*," article *pleurisy*, page 135.

"Laennec seems to think that percussion and mediate auscultation can determine the presence of fluid only, but it is certain that the chest will sound dull, and the respiratory murmur will disappear equally, in consequence of lymph being effused in the pleura, as in consequence of fluid being interposed between the lungs and the chest."

Professor Williams, in his published lectures, speaking of pleurisy, says—

"But there are some signs which remain after the rest for a considerable time; as, for instance, *the dulness in the lower part of the chest; and it is not at all uncommon to find dulness remaining in the lower parts of the chest for many weeks and months after the other signs have disappeared.*" (The italics are mine.) "I believe this arises not merely from the existence of liquid, but likewise from some other accumulations there. You find, in persons who have suffered from pleurisy, a considerable amount of adhesions in the lower part of the chest, probably the result of these accumulations; therefore the dulness on percussion, in this case, need not alarm you, nor cause any uneasiness, so long as the other symptoms are gone."

Dr. Ward says, that it is to beg the question, to say that dulness is of no avail in the diagnosis of the causation of crepitus; he also speaks of my "erroneous views," and "insufficient arguments and erroneous conclusions." How far he is justified in speaking so, and has succeeded in his object, I leave to your readers to determine, after they have carefully compared his observations with the above quotations from two of the most eminent writers of our day.

Some of your readers will remember that Dr. Ward originally gave as an explanation of this sign, the pressure from an enlarged heart; but on my calling his attention to it, he coincided in the opinion of Dr. McDonnell, "that the crepitus is the result of returning respiration in a portion of the lung the seat of serous congestion. But this opinion, according to his own showing, was hastily formed, as he had not then read Dr. McDonnell's first paper upon the subject, and, in fact, all he knew of it was obtained from a short reply of that gentleman to some remarks made upon his paper by Dr. Bennet, sub-editor of *THE LANCET*.

The following is Dr. Ward's latest opinion on the subject: "In conclusion, I beg to signify my concordance with Dr. McDonnell's views of the cause of crepitus, only in cases whose co-existing adhesions have prevented the lung from floating on the surface of the effusion, and thus have subjected it to considerable pressure from the superincumbent or rather circumfused fluid."

Doubtless, this is a cautious opinion. I know not what Dr. McDonnell may think of it, but if his views are incorrect without such a qualification, they certainly are not correct with it. But I would seriously ask Dr. Ward, if, as he says, "the lung is bound down by adhesions, and strongly compressed by the circumfused fluid," how is it possible for it to recover its normal function, or give out a crepitus, according to Dr. McDonnell's explanation of that sign? In my opinion, it closely resembles reasoning from an impossibility. The subjoined case that I lately had the opportunity of observing, is not altogether without interest, taken in conjunction with the subject under consideration:—

B. W—, aged forty-five, admitted into the Essex and Colchester Hospital under my colleague, Dr. Williams. In consequence of my colleague's absence for a week, he placed the man under my care on the 23rd July, when he presented the following appearances: pain in right side, slight cough, no expectoration; pulse ninety-six, profuse perspirations, and well-marked hectic; the pain in the side had existed for three months, and was treated as pleuritis before his admission. On examining the right side, I found it dull all over from the fourth rib downwards; there was also deficient expanse, and it measured an inch more than the left; the heart pulsated more to the left than normal; respiration absent anteriorly and posteriorly; but at the side, over a small space "about two inches square," a very fine crepitus and feeble bronchial respiration could be heard.

In consequence of the chaplain having come into the ward while I was making the examination, it was terminated quickly, and on resuming it next day while he lay in bed, I accidentally discovered that by placing him on his left side I was enabled to change the character of the sound from a very fine crepitus to a particularly strong friction-sound.

It is apparent that the bronchial respiration and fine crepitus were audible in consequence of the lung being connected to the costal pleura by adhesions, and that the crepitus became a friction-sound when the patient was so placed as to cause the fluid to recede from the walls of the chest, and allow the pulmonary and costal surfaces to come into more immediate contact.

Let it be remarked, that it only required the addition of the rusty sputa (and not necessarily this) to class the case as one of pneumonia; and had it not been for a knowledge that the crepitus could arise from the pleural friction, how readily might I have supposed, and acted upon the supposition, that I was dealing with a case of pneumonia. Generally speaking, as regards the treatment, the diagnosis may not be of much practical importance; but in this case, a correct diagnosis was of considerable moment, as the individual possessed a strong phthisical "family" predisposition, and we had to choose between an expectorant and an antiphlogistic treatment. Had the substance of the lung been implicated, the concomitant symptoms were of a character to deter one from adopting an active treatment, and though a tubercular tendency had shown itself, the pleural disease was of a character to justify the adoption of the only means that can, with any degree of confidence, be relied upon for arresting inflammatory action in a serous membrane—I allude to mercury, which was given in this case with the most satisfactory results; and I request attention to the important fact, that the night perspirations and hectic "symptoms," which, till lately, would have deterred most persons from using mercury, were those upon which it first exercised its beneficial influence.

Diagnosis of effusion.—The gurgling of fluid which I alluded to on a former occasion as an aid in the diagnosis of pleuritic effusion, is not limited in its application to affections of the pleura; it proves of equal advantage in effusions into the pericardial and abdominal cavities, as the following cases will illustrate.

Hydropericardium.—A young man, aged thirty-five, had been ill for a month, complaining of dyspnoea, and a pungent pain under the left breast; he was under treatment by his usual attendant, by whom he was sent to me for examination, as he wished to be bled in the arm—a measure that his attendant very judiciously refused to adopt. He presented the following symptoms when he came under my observation:—pain in the left breast, dyspnoea, pulse 90, weak, and giving a peculiar undulatory motion; extensive dulness in the præcordial region: the sounds of the heart were of a normal rhythm, but appeared to be formed at a distance from the surface of the chest, and there was a peculiar undulatory motion of the heart, which was perceptible to the patient himself, and occasionally the sound of

gurgling could be caught; the complete immunity of the lungs fixed the dependence of the symptoms upon disease within the pericardium, and although the other symptoms may have been adequate to the diagnosis of effusion, they were necessarily of so equivocal a character that it was satisfactory to have them corroborated by so valuable a sign as gurgling. The trivial amount of disturbance caused by so serious an affection was very remarkable; he had actually been mowing for two hours on the day before I examined him, and could walk for a few miles at a slow pace; but to walk quick for twenty paces would cause the most distressing dyspnoea; and this explains a very important fact, that proved the stumbling-block to the correct diagnosis of many thoracic diseases before the introduction of the stethoscope. When a person formerly suffered from embarrassed breathing and dropsical symptoms, hydrothorax was considered to be the first link in the diseased chain; but we now know that it is the very last, and that disease of the heart is the primary one—disease of the heart producing a relative disproportion between the contents of its cavities. In hydropericardium, this relative disproportion cannot exist, as all parts of the heart sustain equal pressure, and it is only by sending the blood too quickly to the heart that the dyspnoea is rendered distressingly apparent. The intelligent gentleman under whose care the case was, adopted the same view of it that I did. He treated the case by cupping, mercury, and counter-irritation, with complete success.

Hydrometra.—On Tuesday last, I had occasion to make a stethoscopic examination in a case of obscure uterine enlargement, in which I was assisted by Mr. Morris of this town. We were unable to detect any placental or foetal murmurs; but the gurgling of fluid was so distinct that it arrested the attention of both of us, quite independent of each other; the motion appeared to have been imparted to the fluid by the descent of the diaphragm, and the contraction of the abdominal muscles. I mention this case, as the hint may be serviceable in other cases, where it may be difficult to diagnose the presence of effusion—no usual circumstance in cases of ascites, accompanied by a deposition of cellular tissue in the abdominal walls.

September, 1845.

CASE OF HYDATID TUMOURS IN THE ABDOMEN AND PELVIS.

By JOHN MORLEY, Esq. Surgeon, Burton-upon-Humber.

JOHN G.—, aged thirty-eight, waterman, of sallow complexion, first consulted me on September 8th, 1843, on account of spasmodic affection of the stomach, to attacks of which he has been subjected for many years. He was relieved by the medicine that was administered, in the course of about a fortnight, and I did not see him again until

May 24th, 1845, when he applied to me on account of great enlargement of the abdomen, which had increased very rapidly of late, so as to prevent him following his occupation. He states that he has always been high-bodied; his general appearance is much altered since I last saw him; countenance more sallow and cachectic. He complains of sickness, flatulence, and constipation of bowels; is unable to walk far, on account of dyspnoea; pulse quick and weak; urine small in quantity, almost limpid, and of low specific gravity, being only 1.07 at a temperature of 84° Fah., not coagulable by heat or nitric acid. On examination of the abdomen, whilst lying on his back, a large tumour was perceived, extending from the epigastric and left hypochondriac to the upper margin of the pubic region, inclined towards the left side, measuring at its greatest circumference thirty-seven inches. The space occupied by the tumour was dull on percussion. The right hypochondriac and lumbar regions sounded remarkably clear. I tried the effect of hydriodic acid and aperients for about a month, without benefit. In the beginning of July his abdomen became more enlarged, and he was very drowsy, his urine contained a deposit, which was convoluted, about the length and thickness of a crow's quill; it looked like pus or semen.

July 16th.—He was attacked this morning with an epileptic fit, which lasted half an hour. Mr. William Eddie visited him in my absence, and ordered twelve leeches to be applied to the temples, sinapisms to the calves of the legs, and purgatives.

17th.—Is more comatose, being almost always asleep, although easily aroused. Passes but little urine. Applied a blister to the nape of the neck.

19th.—Dr. Alderson visited him, and confirmed our opinion that this was most probably a case of hydatid tumour; suggested the idea that it might possibly be a simple cyst, and advised that the tumour be punctured.

20th, eleven A.M.—Mr. William Eddie visited him with me, and after a careful examination of the case, concurred as to the

propriety of the operation proposed by Dr. Alderson. A trocar was introduced at the linea alba, on withdrawing which the canula became obstructed with the coats of hydatids; the incision was prolonged about two inches, which permitted two washhand-basinsful of hydatids to escape, varying from the size of a hen's egg to that of small peas. These were perfectly transparent whilst warm; there were also myriads of broken-down cysts, some of which were reduced to a pulaceous mass. He bore the operation remarkably well; the wound was closed by the quilled suture, and a bandage applied. He took, an hour afterwards, half a pint of gruel, expressed himself comfortable, and said he should soon be right. In the course of an hour he became comatose, and could not be aroused.

21st, ten A.M.—Lies on his back, breathing with an apoplectic stertor; has frequent spasmodic twitches of the muscles; pulse 120, full and bounding; jugular veins distended and pulsating; has passed no urine since the operation. There has been a great discharge of fetid matter from the urethra.—Quarter to five P.M. On visiting him this afternoon, to introduce the catheter, I found it impossible to do so, on account of an obstruction to its entrance into the membranous portion of the urethra. About five minutes after the attempt he was seized with convulsions, and expired in a few moments.

Examination twenty-three hours after Death.—On exposing the abdominal viscera, a cyst was perceived to the left of the linea alba, extending from the diaphragm to the iliac fossa, situated within the folds of the omentum, in front of the spleen and kidney; it was adherent to the peritoneum by false membrane throughout its whole extent; from its lower portion a narrow band passed off to another cyst, situated between the bladder and rectum; the larger tumour contained a few entire hydatids, with about a quart of debris. Its inner surface was rough and cartilaginous. On the posterior part of its outer coat was a tumour, as large as a walnut, which contained the dry skins of hydatids, firmly packed together. The lower cyst completely filled the pelvic cavity, mounting upwards into the abdomen, and appeared ready to burst; it pressed on the rectum and bladder, so as to displace the latter, and accounted for the difficulty whilst attempting to introduce the catheter. Its cavity was lined by one large hydatid, the inner coat of which was very rough, and contained about a dozen small transparent ones.

The bladder contained about two ounces of turbid urine.

Ureters dilated.

Left kidney enlarged to twice its natural size; hard and lobulated; its pelvis enormously dilated, containing urine.

Right kidney dilated into a large sac; its secretory portion did not appear more than half an inch in thickness.

Spleen small, and softened; stomach and bowels did not present any morbid appearance, with the exception of the rectum, which was much contracted.

Liver congested.

The Gall-bladder contained two calculi, around which it was firmly contracted; one of these weighed sixty-four grains, the other ten.

Chest.—Pleuræ universally adherent; lungs congested; heart dilated and flabby.

The head was not permitted to be examined.

ON THE TREATMENT OF DISEASES OF THE MIDDLE AND INTERNAL EAR.

(Translated from the French by Dr. JOHNSTON.)

THE following paper was read before the Royal Academy of Sciences at Paris, by Dr. Wolff, of Berlin, on the 6th of January, 1845:—

The most recent advance in otiatrics is, beyond a doubt, indicated by the introduction of aërial substances, instead of liquid injections, into the Eustachian tube. M. Deleau was the first to whom this improvement may be attributed. It was he who first demonstrated the inconvenience of liquid vehicles and the advantage of aërial substances, which, from their gaseous condition, are analogous to the air which circulates in the middle ear, and from that very circumstance, much better suited for introduction into the cavity of the tympanum.

But, on the other hand, it must not be forgotten, that aqueous injections have certain advantages over the douche of air—advantages which seem to have been entirely lost sight of by the majority of aurists since aqueous injections have been replaced by the air-douche.

Water is the principal vehicle for almost all medical substances. In nature, as in art, it is the fluidum solvens of the greater part of them. By means of aqueous injections, then, many remedies can be introduced into the middle ear. Thus, Itard injected Barège water, saline and aromatic solutions.