ST. MARY'S HOSPITAL.

PULSATING EMPYEMA AFTER ACUTE PLEURITIS; A SWELLING ABOVE THE LEFT NIPPLE WHICH BURST SPONTANEOUSLY; RECOVERY.

(Under the care of Dr. CHAMBERS.)

ABOUT eighteen years ago some valuable contributions to the diagnosis of empyema were published in the *Dublin Journal of Medical Science* (1844), by Dr. Robert L. Macdonnell, of Dublin (now of Montreal). Most practical physicians are no doubt well acquainted with the views he enunciated, which have greatly added to our knowledge of the diagnosis of purulent effusion into the chest. Amongst other points discussed were, the vicarious purulent expectoration (of which some physicians doubt the possibility), and the diagnosis of pulsating empyema from other affections. The latter was called by Dr. Macdonnell "pulsating empyema of necessity," as the term "empyema of necessity" was always applied by the older writers to cases where the pus works its way outwards and forms a tumour. This appellation was criticized at the time, and in a subsequent essay he abandoned it. As it is frequently referred to clinically, we give it this passing notice for the benefit of the student.

In our present series of cases are two examples of pulsating empyema, which somewhat resembled aneurisms in regard to their formation; one spontaneously burst externally, and for several days large quantities of matter flowed away; and, what is remarkable, both cases have ended in recovery.

For the notes of the following case we are indebted to Dr. Linnington Ash, late house-surgeon to the hospital:—

Edward S—, aged forty-nine, of spare habit, was admitted June 2nd, 1857. He describes the symptoms of an acute attack of pleuritis of the left side, from which he has been suffering during the last eight weeks past. Has noticed the progressive development of a swelling just immediately above the left nipple, which is accompanied by a dull, aching, and occasional throbbing pain. Is aware of no cause, mechanical or otherwise, to account for it, and has enjoyed uninterrupted good health previous to this attack.

Present condition.—Papillæ of tongue elevated at tip and edges, which are clean; centre cracked and covered with a greyish fur; pulse 97, feeble but regular; skin now cool, but at times dry and hot; no cough nor difficulty of breathing now; bowels and urine natural.

Physical signs.—Percussion dull over cardiac region, extending to about an inch above the nipple line, and to a corresponding extent posteriorly, with absence of breath-sounds; breathing good above scapulæ and in front of chest; unusual prominence over left mammary region, which is firm, and pain not much increased on pressure; an indistinct undulatory motion, isochronous with the pulse, perceived in intercostal spaces below mammary line of left side; no aneurismal bruit to be heard. The whole left chest, as compared with the right, is perceptibly larger.

Treatment.—He was ordered six leeches to the region of the left mamma; a grain of acetate of morphia every night; broth diet, with extras.

June 3rd.—Pain relieved since the application of the leeches; sleeps and eats well; there is an elastic sensation in the tumour, and also a slight swelling below the nipple in the space between the fifth and sixth ribs.

6th.—Pulsation with first sound of heart over the most prominent part of the tumour. General health continues much the same, although he now has a troublesome cough, accompanied with copious expectoration of frothy sero-mucus, with clots of tenacious yellow mucopurulent matter, occasionally streaked with blood. Ordered a linseed poultice sprinkled with six drops of dilute prussic acid to be applied to the tumour, and changed three times a day; porter and extra meat.

10th.—Localized redness over normal position of heart's apex; in other respects much the same.

16th.—Centre of prominence raised; cough very troublesome, with copious expectoration of a greenish colour. Ordered fifteen minims of Hoffman's anodyne in a cough linctus every three hours.

17th.—Level of pus does not increase; is free from pain; general health somewhat improved; able to sit up; bronchial breathing in upper chest; pulse 100, full and regular.

26th.—The abscess has been gradually pointing since last

report; pneumothorax now detected, with emphysema of the cellular tissue around the prominence, and impulse also felt there on coughing; pulse 120, very feeble. Ord.—red to have wine freely; the prominence to be touched with caustic potash.

29th.—The abscess burst to-day, discharging about half a pint of light yellow, creamy-looking pus mixed with air, and very offensive.

July 1st.—Eschar has not come away, but there has been a continued and free discharge of pus, which comes out from around its edges; air goes in and out of the opening. Chest very resonant on percussion, from the clavicle down to the opening, from air in pleura; breath-sounds with mucous crepitations heard down to within an inch of the mamma; crepitation also from air in cellular tissue. Heart's action feeble; sounds heard most distinctly between the fourth and fifth costal cartilages, close to the left side of the sternum; after expiration the beat of the heart is communicated to the abdominal walls, and can be felt just above the umbilicus. Expresses himself as feeling much relieved since the abscess burst; coughs but little; sleeps and eats well. Ordered quinine and more wine.

4th.—The eschar was so loose, and moved so much with respiration, that, fearing it might fall into the pleural cavity, it was removed. Percussion resonant to the mammary line; a few metallic tinklings heard in the pleura, and there is still crepitation from air in the cellular tissue. Heart getting much more to the left side.

8th.—There is a very slight discharge from the wound. Lung resonant down to diaphragm. Heart's apex in normal position. General health much improved.

15th.—A very slight discharge continues to issue from the wound.

29th.—A flattening over the cardiac region is perceptible. The sinus is quite healed, and the wound as well as the intercostal spaces over the cardiac region fall in on a deep inspiration.

31st.—Cicatrix adherent to the lower border of the rib. Discharged cured.

In September, 1859, this man presented himself at the hospital for inspection, as requested when discharged. We had then an opportunity of observing that the chest moved freely, fully, and equally on each side; and that, with the exception of the scar, no trace remained to indicate the serious disease through which he had so successfully passed. He expressed himself as being in perfect health, and indeed appeared fully to be so.

CHARING-CROSS HOSPITAL.

SUBSTANCE OF A CLINICAL LECTURE ON A CASE OF THE SO-CALLED "PULSATING EMPYEMA OF NECESSITY;" RECOVERY OF THE PATIENT.

(Under the care of Dr. WILLSHIRE.)

FOR the notes of the following case we are indebted to Mr. Edward Chandler, clinical clerk.

W. S—, aged thirty-five, a coachman, states that during the summer of 1861 he received a blow upon the left side, which deprived him of breath and speech for a short time, and gave rise to a rather enduring sickness. No fixed pain, however, settled at the spot, though an uneasy sensation continued to exist there. From this period his appetite diminished, and he experienced a general feeling of illness. About a month after the above occurrence he felt so unwell that he was obliged to take to his bed. He became rather thirsty, and had a certain amount of cough, though he did not shiver nor suffer from any stabbing pain in the side upon drawing breath. He placed himself under the care of a private practitioner, but in consequence of failing funds was obliged to apply to be visited as an out-patient of the Charing-cross Hospital.

The clinical assistant, upon visiting him on January 5th last, found him sitting upright upon a sofa, a position which he said he had been compelled to adopt for some time previous. He was breathing with much difficulty, and coughing frequently. The sputa were of a purulent character. In appearance he was very emaciated, the cheeks were flushed, and the ends of the fingers had a "clubbed" appearance. Altogether the patient presented an extremely phthisical aspect. He complained of palpitation of the heart, and laid some stress upon there being a "lump" in his side. Upon examination, a tumour was seen bulging out from the eighth intercostal space at the junction of

the diaphragm with the ribs. It was transversely oval, and about the size of a hen's egg. The superjacent skin was of a bluish-red colour, showing evident signs of impending ulceration. Upon closely inspecting it, a pulsation synchronous with the heart's beat was observed to be present. By palpation a pretty forcible pulsation could be felt, but not any thrill or bruit could be detected by it nor by auscultation. The first and second sounds of the heart, however, were to be heard there very plainly. The latter organ was but very slightly moved from its normal position. The intercostal spaces and integuments above the tumour felt doughy, whilst the tumour itself was very elastic and fluctuating.

The patient presenting so precarious a condition, and the tumour simulating in some respects an aneurism, the clinical assistant requested Dr. Willshire to visit the case with him. After having examined the patient as carefully as his condition would permit, Dr. Willshire arrived at the diagnosis of "pulsating empyema of necessity." He then passed an exploring needle into the tumour, and pus made its appearance in the groove of the instrument. An incision was now made, and a pint and a half of thick greenish pus evacuated. The patient at once expressed great relief. A moderate amount of stimulants with quinine and good diet were ordered. Subsequently the entrance and exit of air during the inspiratory and expiratory acts gave rise to quite a whistling kind of sound.

Having sufficiently recovered to permit of being moved, the man was now ordered into the hospital. He was there placed upon full diet, with two bottles of stout daily; and ordered to take the following draught three times a day,—namely: Disulphate of quinine, four grains; iodide of potassium, four grains; dilute sulphuric acid, five minims; aniseed water, one ounce. This treatment being continued for some time—poultices being applied to the wound in the chest—the patient steadily improved.

Feb. 14th.—The part still discharges; the pus, however, is small in amount and healthy in character. From the falling-in of the parietes of the thorax and non-expansion of the left lung, considerable flattening of the left side of the chest has taken place. Slight curvature of the spine is also evincing itself. The physical signs nevertheless prove that the lung is slowly increasing its function. He now sits up, and the air may still occasionally be heard rushing into the chest.

May 22nd.—He has left the hospital for some time, but presents himself weekly as an out-patient. The left lung continues to expand; the flattening of the side is diminishing; the spinal curvature is scarcely apparent; and the patient is picking up flesh and getting colour. A slight oozing from the wound still continues.

In a clinical lecture upon the above case, and upon the operation of paracentesis thoracis, Dr. Willshire drew attention to the larceny of the pleuritic inflammation in W. S.—So latent indeed had it been, that it had not been diagnosed until the patient was seen upon the occasion when the matter was evacuated. The constitutional symptoms, however, had been so severe, and death so imminent, evidently from some pulmonary affection, as to lead to the belief that the patient was dying from phthisis. This was the more readily supposed to be the case from the state of the expectoration and the peculiar appearance of the ends of the fingers. Indeed he himself had a strong idea at first that behind the pleurisy, as it were, a tubercular malady would be found existing. Nor was it until very lately that he had relinquished this view of the case. There were one or two points in the history of the latter upon which he would more particularly dwell. One was the low spot in the chest at which nature would sometimes cause the pus to be evacuated. Occasionally it would be even lower than in W. S.—The matter would even perforate the diaphragm, and "point" in the loin. Secondly, they should remember the pulsatile character of the intercostal swelling, and the care that must be taken not to confound the latter with a tumour connected with the vascular system. In the third place, let them recollect the immense relief that may be given by freeing the pleura from pus, and the non-necessity for any untoward effects to follow from the entrance of air into the place such pus had previously occupied. He did not mean to say that the entrance of air should not be prevented were it easily to be accomplished; but it was not so under any circumstances, unless perhaps when the operation was performed under water, or with a complex apparatus of capillary trocars and suction-pump. Both these methods had been followed—methods which he considered as unnecessary as they were fussy and imperfect in one important relation. Since he (Dr. Willshire) had punctured in this case of "empyema of necessity," he had performed paracentesis thoracis upon a young gentleman suffering acute pleurisy, and

from whom he had drawn off nearly two quarts of serum. During the latter part of the operation the air was frequently and plainly heard to enter the chest. The young gentleman's life was hourly in risk from impending suffocation, and hence the operation thus early. Some weeks afterwards fluid had again accumulated, and was then drawn off by the general attendant. After a few days, however, the patient unfortunately sank. Now, in this case not any effusion of pus had ensued, although the air had freely entered the cavity of the right pleura. Of this operation some practitioners thought very highly, whilst others of equal reputation placed but little trust in it. He himself believed that paracentesis thoracis might often be adopted with great benefit to the patient, provided it was had recourse to at a sufficiently early period. He thought no one was justified either in letting a patient die suffocated with his pleura full of fluid from acute pleurisy, or in permitting him to be gradually worn out from the same cause in the chronic form of the malady, without giving him the reasonable chance of prolongation of life, if not of complete cure, from the performance of the operation to which he had drawn the attention of the students.

ST. GEORGE'S HOSPITAL.

EMPYEMA AFTER ACUTE PLEURISY, THE SEQUEL TO
NEPHRITIS AFTER SCARLATINA; DEATH.

(Under the care of Dr. FULLER.)

THE patient in the present case was primarily affected with scarlatina, which subsequently produced inflammation of the kidneys. A few days later a serous membrane was attacked with inflammation, ending in effusion: this was pleurisy. The case ended unfavourably, and after death the affected side of the chest was found to contain a quantity of pus.

Edward G.—, aged seventeen, admitted Nov. 16th, 1861. Two weeks previously he had suffered from sore-throat and an eruption, in a house where there had been scarlet fever. On admission, the skin was not acting freely; he had puffiness about the face, and slight oedema of the feet and ankles, which, he said, appeared suddenly five days earlier. He had some palpitation; the heart's action was a little irregular, the sounds loud and clear. The urine was normal in quantity, but contained albumen and blood-globules. He complained also of aching in all his limbs. Ordered a vapour-bath; beef-tea; and a mixture containing tincture of digitalis and sulphate of magnesia.

Nov. 18th.—The urine became loaded with blood, but he felt quite well, and there was no excess of oedema.

19th.—The urine remaining unchanged, he was dry-cupped and fomented over the loins; the vapour-bath was repeated, and compound powder of jalap ordered.

On the evening of the 20th he was suddenly seized with most acute pain in the right side, which was relieved by eight leeches.

On the following morning there were dulness, some tubular breathing, and ægophony low down on that side. The bowels had acted two or three times, blood being found in the motions. He was ordered three grains of calomel and a quarter of a grain of opium thrice a day, and turpentine fomentations; but, the gums being affected on the 22nd, this was continued only at night.

On the 24th he again suffered most acute pain in the right side, where pleuritic friction could be heard; and for this he was ordered a quarter of a grain of opium every four hours, with a mixture of acetate of potash and sulphate of magnesia. Four leeches were also applied, and afterwards fomentations.

On the 25th he was reported to have passed a very restless and painful night, and when seen his breathing was very rapid and catching. He complained of pain across the abdomen to the back; was restless, and anxious to get out of bed; his pulse was rapid and feeble, and he was constantly eructating. An enema was given without relief. Towards the afternoon he began to sink rapidly, and died in the evening.

Autopsy fifteen hours after death.—There was no external oedema. The right pleural cavity contained a very large quantity of turbid fluid, with a copious sediment of pus. The walls were lined with a thick coating of shaggy lymph, and the lung was so compressed that no air would enter the pulmonary tissue. The left lung was more solid than natural, but not hepatized. The heart was healthy, the left ventricle being filled with partially decolorized coagula. The kidneys were much increased in size, especially in the cortical portion, and