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NEW SERIES.

HOSPITAL REPORTS.

Bristol Royal Infirmary.

PISTOL-SHOT WOUND OF THE CHEST: WOUND OF THE HEART AND STOMACH.

By AUGUSTIN PRICHARD, Esq.

I WAS sent for about half-past twelve o'clock in the night of Saturday, the 20th of October last, to see a patient, W. B., aged 28, who had just been brought to the Bristol Royal Infirmary with a pistol-shot in the chest. From the account given at the time, and from his own statement, as well as from the evidence given after his death at the coroner's inquest, it appears that he had been shooting with a long-barreled rifled pistol, at one of the galleries in the town; and that, after a few shots, he sent the owner of the gallery to rectify something supposed to be wrong at the target, but that immediately afterwards a pistol-shot was heard, and he was found lying on the ground, writhing in pain. He stated that he was examining the cap and the nipple of the lock, and it accidentally went off. When I saw him first, he was lying in bed, gasping for breath, and fainting; he was covered with blood, and had a round hole in the left side of the chest, between the fifth and sixth ribs, about four inches to the left of the middle line, corresponding to a similar hole in his waistcoat, and the three shirts he had on at the time of receiving the injury. The direction in which the hole led appeared to be downwards, and inwards, and backwards. The little finger could be readily passed in, and something like the beating of the heart could be felt.

Considering the position of the wound, which was as nearly as possible over the apex of the heart, I was unwilling to disturb the parts, being quite ignorant of the course of the ball. Mr. Crisp, the assistant house-surgeon, who saw him directly he was admitted, had passed in his finger, and said that he felt the pulsations of the heart. He had lost a considerable quantity of blood, and air and blood bubbled out of the chest at each expiration. There was no tender part on the back, to indicate that the ball had gone through or into the muscles of the back. About an inch and a half above the hole made by the entrance of the ball—i. e., about between the fourth and fifth ribs on the left side—was a depressed scar, which was caused, he stated, by a bullet, shot by a Spaniard in a brawl, a year ago. This ball was removed by incision from the back, and the scar was still visible in the spot indicated.

His chest anteriorly was very clear on percussion; but he was so faint and distressed that, after seeing that there was no special indication for treatment, I had a compress placed upon the wound, and ordered him half an ounce of brandy, with a little laudanum, every two hours.

Oct. 21st. He was better; that is, he had recovered from the shock of the injury, and was getting warm. He complained chiefly of pain in the back. Breathing easier; pulse 84. There was considerable oozing of blood from the wound, and constant vomiting troubled him. Mist. acidi hydrocyan. To take the brandy occasionally, and to leave off the opium.

Oct. 22nd. He was still vomiting; the skin hot, breathing hurried, and his pulse 120. He passed water. In the evening, he complained of great tenderness of the abdomen, but he was in other respects easier.

Oct. 23rd. He had more sleep in the past night than before. Skin warm; less pain; pulse 108. He took some milk, and vomited once.

On the 24th, he complained of pain in the chest, and expectorated a little blood. Pulse feeble.

Empl. cantharidis lateri dext.

Morph. hydrochl. gr. $\frac{1}{4}$; aquæ $\mathfrak{z}$ j; o. $\frac{1}{4}$ h.

After this time, he became a little better, but his condition constantly varied. His bowels had acted, and he expressed himself as tolerably comfortable.

On the 2nd of November, a small slough, which had formed in the wound, came out; and he had a sudden fit of coughing, when a considerable quantity of fluid and black, partially decomposed blood, escaped from the hole. It was lightly covered with a compress, and he was ordered some brandy and a carbonate of ammonia mixture.

On the 8th, the smell from the wound had become very foetid, and like that from a gangrenous part; and when he inspired deeply, or coughed, some dark and foetid fluid escaped. The side to be covered with a charcoal bag; and a compress, soaked in the lot. sodæ chl., to be placed lightly over the wound.

On the 10th, I suspected, from the appearance of the fluid which escaped, and from its odour, that the wound communicated with the stomach. The smell sometimes was almost fecal.

On the 12th, a large quantity of very thick inodorous pus escaped; and, on the 14th, vomiting recurred. No remedy checked this painful sickness; and, in the night of the 16th, he began to vomit blood. He became blanched from the loss of blood, for he could keep nothing in his stomach which would check the vomiting. On the 18th, he was evidently sinking; and on the 19th, he became delirious, the vomiting having ceased, and all the fluid escaping through the wound. He died about 10 $\frac{1}{2}$ p.m. in the evening of the 20th, having apparently suffered great torture for the last twenty-four hours.

POST MORTEM EXAMINATION, at 11 A.M. on the 21st, thirteen hours after death. The body was much emaciated, and very white. The wound and the old scar before spoken of were visible; the former being considerably larger than it was originally, with its edges in a sloughy state. There was also a scar upon the left side of the vertebral column, about opposite the middle of the posterior edge of the scapula, showing the place where the incision had been made to remove the ball when he met with his first injury. Upon pressure over the epigastrium, black fluid flowed freely from the wound. The integuments of the thorax and abdomen were turned back in the usual way, and we saw, above the recent hole, the scar in the intercostal muscle, between the fourth and fifth ribs, with minute specks and streaks of black interspersed among the muscular fibres, evidently the grains of gunpowder which had entered with the ball in the first wound. The left lung was firmly adherent to this point, and also to the edges of the recent wound. At its lower part was a circumscribed portion of the pleural cavity, cut off by adhesions from the rest, and bounded externally by the ribs, below by the diaphragm, and above and internally by the adherent lung. This cavity contained dark fluid, and its sides were black and sloughy, covered with flakes of purulent matter, having a very foetid odour. Pressure upon the

stomach forced the same black fluid into the cavity, and (before the chest was opened) through the external wound. On the front of the pericardium was a small quantity of recent blood. The right lung was bound down to the pleura by some recent adhesions. On the left side of the body of the eighth or ninth dorsal vertebra, involving the head of the rib, was an irregular hole, which would admit the end of the fore finger, and which was like a carious vertebra, except that the cancellous structure into which the finger penetrated was firm and strong, and did not break down under the finger like a carious bone. On the right side of the same vertebra there was a small abscess under the pleura, as large as a walnut, containing thin dark pus; and from this point a discoloured line ran between the ribs for some distance along the corresponding intercostal space on the right. The pericardium was generally adherent to the heart. On the left of the apex of the heart, a portion of the size of a shilling was in a gangrenous state, with loss of substance the eighth of an inch in thickness; and a small, irregular, and discoloured hole in the pericardium corresponded with the sloughy part of the heart. One or two black specks upon the surface of the heart looked like granules of gunpowder. There were no traces of general peritonitis in the abdominal cavity. The liver was slightly enlarged, with a few old fibrinous adhesions to the diaphragm. The stomach was adherent to the under surface of the same muscle, and its coats gave way a little at this point, in removing it; thus enlarging an opening which had existed behind and a little to the left of the oesophageal opening. The mucous membrane of the stomach was dark and very vascular, especially around the opening, where it was also soft and sloughy.

There were no distinct traces of the passage of the first ball through the left lung; but posteriorly, one of the ribs was thick and irregular, as if a fracture had occurred, and the bone had been subsequently consolidated. A small leaden bullet was found under the body on the table; and as the body was washed out with a stream of water, and turned over after the chest had been opened, it is probable that it had rolled out at that time from the hole in the vertebra, where it had apparently been very loosely held.

This case was one of great interest throughout, and I therefore felt myself justified in reporting it minutely, especially as regards the appearances after death, the principal part of which I have transcribed from Mr. Crisp's notes. On only one occasion I questioned the patient as to the direction in which he held the pistol, and he then said that it was in the right hand with the muzzle directed obliquely downwards and to the left from the position of the external wound.

The medico-legal question is, as to whether it was intentionally inflicted or not. The coroner's verdict was "accidental death", with which I do not wish to interfere. It is, however, not very intelligible how he could have held a long pistol, as this was, in the right hand to examine the cap (as he stated) with the point directed exactly towards the apex of the heart, without turning the arm in a very inconvenient position. The presence of gunpowder in the intercostal muscles corresponding with the old scar, proves that in that case too the instrument was very close to the chest when the shot was fired.

The course taken by the second ball was evidently this: It penetrated the intercostal muscles and pleura, touched the apex of the heart, glanced across the diaphragm, cutting it sufficiently to cause inflammation, and subsequent sloughing after forming union with the stomach below, and then directly backwards to the vertebral column. When the vomiting and coughing occurred after removal of the slough from the wound, the blood that had collected in the circumscribed pleural cavity, before alluded to, came out from the wound, and after some days the slough of the diaphragm and stomach separated, and the contents of the latter organ escaped through the chest, without any wound of the abdomen, which nature had thus guarded against. He lived thirty-one days after the receipt of the injury.

ORIGINAL COMMUNICATIONS.

ON THE NON-MERCURIAL TREATMENT OF CERTAIN FORMS OF SYPHILITIC DISEASE: ANALYSIS OF 1,400 CASES.

By HENRY LEE, F.R.C.S., Surgeon to the Lock Hospital, etc.

[Read before the Medical Society of London, Nov. 10, 1855.]

As long as the treatment of disease is based upon opinion only, it can never become scientific in the proper sense of the term. The opinions of physicians and surgeons, however eminent these may be in their respective spheres, will never convince or regulate the practice of others, so long as they remain opinions only, not proved by experiment, nor supported by well ascertained facts; and for this simple reason, that an opinion, before it is established upon evidence to which all may appeal, is sure to be met by opinions of a different nature. There have not, indeed, been wanting those who have maintained that some minds have the power of intuitive perception, by means of which they at once grasp the principle of a truth without going through the laborious process of building up a theory from the separate individual facts which constitute its elements; while others have maintained that no doctrine can be sound that is not thus fairly deduced from separate facts previously ascertained.

Without wishing to confine the acquisition of ideas exclusively to either of these operations of the mind, it may confidently be affirmed that an opinion, whether true or not, can never be generally received, and maintain its influence among educated men, as a means of regulating their practice, unless they have the means of bringing its truth to the test of experience. For a short time, indeed, the influence of a great mind may lead many to yield unsuspecting submission to an ingenious theory; but, unless the truth of the doctrine be supported by accurately ascertained facts, a period is sure to come when the stability of the whole will be canvassed, and there is then danger lest some truth which the doctrine may have contained should be overlooked in the exposure of that which cannot be proved; and if, under these circumstances, any line of practice has been based upon the doctrine thus hastily established, the reaction which naturally follows its fall is apt to lead to an extreme in an opposite direction.

These general observations have an excellent illustration in the history of the treatment of syphilis. Thus, while we have such a man as the late Mr. Pearson stating, from the observation of not less than twenty thousand cases, that mercury could be safely trusted to for the cure of syphilis where that disease only was to be dealt with, we have had other men of great experience at other times stating that all forms of syphilitic disease might be cured without mercury at all. From the writings of one author then, a student might be led to give mercury in every case of syphilis which he met with; he might, by reading another author, be induced to believe that no case of syphilis ought to be thus treated. Now, in bringing these contradictory opinions to the test of experience, the first question which presents itself is, whether the authors who have advocated these different plans of treatment have observed the same class of cases; and if not, whether the different kinds of disease from which they originally took their opinions may not account for the different treatment which they appear to have been inclined to adopt, without discrimination, in all cases. If it can be shown, as I believe it may, that there are distinct morbid actions produced by the application of the syphilitic poison, differing alike in their local results and in their effect upon the constitution, then it is no longer possible to conclude that the same plan of treatment is adapted to these different conditions.

Two years ago, I had the honour of reading a paper before this Society, in which I attempted to describe four