A REVIEW

OF THE LATE

PRESIDENT GARFIELD'S CASE.

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THE following article by Dr. Hamilton, on President Garfield's case, was to be published in the *New York Medical Gazette*, October 1st.

In answer to inquiries, Dr. Hamilton dictated as follows.

So far as I am informed, the testimony is conflicting as to the relative positions of the President and the assassin when the pistol was fired. It is now rendered probable that the assassin stood well to the right and slightly in the rear of the President. The ball entered about four inches to the right of the spine, penetrating and comminuting the eleventh rib, entering the intervertebral substance between the last dorsal and first lumbar vertebrae, and, passing obliquely forward, emerged at a point near the centre of the first lumbar vertebra in front, and was found some distance to the left of the vertebra at the lower margin of the pancreas—being situated nearer its posterior than its anterior surface—wholly without the peritoneal cavity. It is unnecessary to say that the course of the ball, after penetrating the rib, was not determined until after death. I saw the patient on the morning of July 4th, in consultation. We were then informed of the manner of the accident, and that, on receipt of the injury, the President had fallen to the floor, sinking down to the right side; that, being interrogated, he complained of pain in his right ankle, and subsequently, in the course of the day, of a similar pain in his left ankle, which pains had been promptly relieved by the hypodermic injection of morphia. He vomited immediately after the receipt of the injury, and in the course of the day his urine had to be drawn once by the catheter. There was not, when first seen by myself, nor has there been at any time subsequently, any apparent loss of power in his lower extremities, or diminution of the natural sensibility at any point. The pains in his ankles, however, were accompanied with hyperæsthesia of the integument; and, a few days later, it was observed that there was hyperæsthesia of the integument of the right side of the scrotum. All of these symptoms—the pain and the hyperæsthesia—disappeared wholly in the course of the first week or two, and never returned. On the morning of July 4th, the patient, being partially under the influence of the morphia, was not suffering pain, the bowels were tympanitic, and the pulse was feeble. At the first consultation, the question having arisen as to the probable course of the ball, it was stated that Surgeon-General Wales, of the navy, had, on the day of the receipt of the injury, introduced his finger to its full extent, and that he had declared that it penetrated the liver, the structure of which he recognised by its granular feel; and Dr. Bliss stated that he had introduced a probe about three inches, which seemed to have passed in the same direction. This testimony was regarded sufficient to determine that the ball was at least beyond our reach, and beyond the reach of safe exploration. Dr. Woodward had introduced his finger sufficiently deep into the wound to determine that the rib was broken. Finding, upon personal examination and inspection, that the track of the wound was completely closed by a firm clot, I refused to make any further exploration.

From this time forward, great uncertainty existed in the minds of the medical attendants as to the actual course and presence of the ball. On July 24th, and after the complete subsidence of the tympanites, a circumscribed point of induration was discovered in the right iliac fossa, which at once led to a suspicion that the ball had been deflected, coursing along the anterior surface of the lumbar muscles, and that this induration indicated its present seat. This suspicion was sustained by the hyperæsthesia of the right side of the scrotum, which, as Professor Weisse had already shown in his anatomical observations, would be the natural result of an injury of the ilio-inguinal or ilio-hypogastric nerves, which lie in the course of the then supposed track of the ball. Still further confirmation was added when, on July 27th, we found that a flexible catheter could be carried downward in the direction of the supposed situation of the ball to a distance of seven inches. The point of induration in the right iliac fossa gradually moved downward and became more hard and defined, conveying the impression that it was the ball, and that it was encysted. At the necropsy, it having

been determined that this was not the ball, further examination of the channel in this direction was not prosecuted. Indeed, this induration had entirely disappeared after death, and it is now presumed that it only indicated the lower end of the long sinus already described.

About this period, a small pouch of pus was formed in connection with the main channel, extending underneath the integuments of the back, causing rigors which were at once relieved by a free incision; and, a little later, rigors followed in consequence of the temporary obstruction of the channel caused by the floating of a small fragment of the rib into the orifice, which were relieved on the removal of the fragment.

On August 8th, great difficulty having been experienced in the introduction of the drainage-tube into this long suppurating canal, an incision was made below the twelfth rib, the patient being under the influence of ether. About a week later, the stomach of the President became exceedingly irritable, and it was found necessary to suspend alimentation by the mouth, and for three or four days he was nourished only by enemata. On the fourth day after the suspension of alimentation by the mouth, the right parotid gland began to enlarge (August 17th), and on August 24th suppurated, and was incised, the first incision giving exit only to a few drops of pus. Subsequently, it opened into the mouth and meatus auditorius externus, and three or four incisions were made at different points on the surface for the exit of matter. At the time of death, the suppuration and swelling of the parotid gland had almost entirely disappeared.

Following the parotitis, there was a gradual development of bronchitis in the right lung; and, finally, a broncho-pneumonia of the lower portion of the right lung, indicated by well-defined dullness and a total absence of the respiratory murmur in that region. From this time until the period of his removal from Washington, there are no events of striking interest worthy of being related in this brief summary, except the alarming weakness and great somnolency of the patient, which occurred on the 24th, 25th, and 26th of August, and which led to an apprehension that a fatal issue was at hand. The patient was evidently suffering from atmospheric influences, the heat being intense and oppressive, and most of the time the air being motionless, so that a leaf could not be seen to stir upon the trees surrounding the White House. There was no evidence, however, at any time, that the patient suffered from malaria having its source in the house-drainage or the marshes in the vicinity, which latter, at a later time in the season, had always been regarded as pestiferous. His removal to Long Branch occurred on the 6th of September, and was effected without injury or discomfort to the patient, with only a slight amount of fatigue, manifested after his arrival, and from which on the following morning he had completely recovered. There was no day while he lay in the cottage at Long Branch that he did not express himself as pleased, and even delighted, with the change; nor was he ever oppressed by the heat, although one of the days (the first after his arrival) was the hottest day of the season. At two o'clock in the afternoon of this day, when the heat was greatest, in reply to my inquiry, he said he experienced no discomfort. From this time until the period of his death, which was sudden and unexpected, although in no sense unanticipated, there is no incident worthy of special note—except that there was a gradual change in the last two or three days for the worse. The manner of his death, and the result of the subsequent necropsy, are sufficiently explained in the official bulletin.

[We here insert the official bulletin.—Ed.]

"A *post mortem* examination of the body of President Garfield was made, eighteen hours after death, in the presence and with the assistance of Drs. Hamilton, Agnew, Bliss, Barnes, Woodward, Reyburn; Andrew H. Smith, of Elberon; and Acting Assistant-Surgeon D. S. Lamb, of the Army Medical Museum, Washington. The operation was performed by Dr. Lamb. It was found that the ball, after fracturing the right eleventh rib, had passed through the spinal column in front of the spinal canal, fracturing the body of the first lumbar vertebra, driving a number of small fragments of bone into the adjacent soft parts, and lodging below the pancreas, about two inches and a half to the left of the spine and behind the peritoneum, when it had become completely encysted. The immediate cause of death was secondary hæmorrhage, from one of the mesenteric arteries adjoining the track of the ball, the blood rupturing the peritoneum, and nearly a pint escaping into the abdominal cavity. This hæmorrhage is believed to have been the cause of the severe pain in the lower part of the chest complained of just before death. An abscess cavity, six inches by four in dimensions, was found in the vicinity of the gall-bladder, between the liver and the transverse colon, which were strongly adherent. It did not involve the substance of the liver, and no communication was found between it and the wound. A long suppurating channel extended from the external wound, between the loin muscles and the right kidney, almost to the right

groin. This channel, now known to be due to the burrowing of pus from the wound, was supposed during life to have been the track of the ball. On an examination of the organs of the chest, evidences of severe bronchitis were found on both sides, with broncho-pneumonia of the lower portions of the right lung, and, though to a much less extent, of the left. The lungs contained no abscesses, and the heart no clots. The liver was enlarged and fatty, but free from abscesses; nor were any found in any other organ except the left kidney, which contained, near its surface, a small abscess about one-third of an inch in diameter. In reviewing the history of the case, in connection with the necropsy, it is quite evident that the different suppurating surfaces, and especially the fractured spongy tissue of the vertebra, furnish a sufficient explanation of the septic condition which existed."—D. W. Bliss, J. K. Barnes, J. J. Woodward, Robert Reyburn, F. H. Hamilton, D. Hayes Agnew, Andrew H. Smith, D. S. Lamb.]

It may be necessary, however, to repeat, inasmuch as contrary statements have been made, that the lungs contained not even the most minute abscess, and that there was no metastatic abscess found in any of the structures examined, except one less than half an inch in diameter near the surface of the left kidney. There were three small serous cysts under the peritoneal covering on the convex edge of the right kidney, each about the size of a vertical section of a large pea. The abscess found between the transverse colon and the liver was evidently not metastatic, but probably was caused by the original injury. There was no cicatrix or wound of the liver, nor anything to indicate that it had suffered injury in the slightest degree.

Since it has been thought by some that it was the duty of the surgeons to have ascertained positively the course and location of the ball, it is proper to consider whether either the one or the other was practicable.

As to determining the course of the ball by a probe, every anatomist will see that it was impossible, if he will consider the very tortuous course which the ball must have taken to reach its final destination; that it passed through the solid structure of the vertebra; and that no metallic instrument sufficiently firm to give indications of the course and direction which it took within the body could ever have reached the ball; nor would any surgeon of experience, familiar with gunshot wounds of the belly, in the absence of any satisfactory or conclusive evidence as to what course the ball had taken, venture to introduce a probe into the abdominal cavity for the purpose of exploring the supposed track; nor, indeed, if he had evidence as to the course and situation of the ball, could he have been justified in such an exploration. No point is better settled in surgery than that interference of this sort in gunshot wounds of the belly is meddlesome, useless, and dangerous; and had it been done, and a fatal peritonitis, in consequence, been set up, the surgeon doing it would have been justly held responsible for the fatal result.

As to the possibility of the extraction of the ball safely, it would have required a large tegumentary and muscular incision as a means of approach to the spinal column; the actual removal of the whole of the twelfth lumbar vertebra in order to furnish a sufficient channel through which the bold surgeon should advance with his instrument for extraction; and, after emerging from the cavity thus made in the spinal column, he would have to penetrate or grope his way cautiously between the ganglionic system of nerves, and arteries, veins, lymphatics, including the thoracic duct, all of which are vital structures, almost inextricably joined to each other on the front and sides of the spinal column, and the lesion of any one of which must have proved inevitably fatal.

Throughout the whole course of the treatment, contrary to what has been publicly said repeatedly, so far as it was possible to apply the system of antiseptic surgery advocated by Mr. Lister to a wound of this character, it was rigorously employed.

I am reminded now to say, in reply to some suggestions made from time to time, that we ought to have made a counter-opening in the lower portion of the long sinus which terminated in the right iliac fossa; that there was no period of time during the progress of the case in which we felt absolutely certain that what we recognised in the fossa as a point of induration was the ball; nor were we entirely certain at any time where the lower end of the sinus was actually situated; nothing but a very flexible instrument could ever be introduced, and, inasmuch as when introduced its presence in the track could not be recognised by the sense of touch, we were left without any means of determining, with a sufficient degree of accuracy to justify an operation, where the lower end of the channel was. Indeed, it is probable that the flexible catheter employed never reached the lower end of the channel, but doubled upon itself near the crest of the ilium. To have cut through, or between, the great mass of muscles in the lower portion of the lumbar region, for the purpose of making a counter-incision into a small

channel, the course of which we did not and could not know, even approximately, would have been, under any circumstances, an unjustifiable procedure—and especially so in the case of the President, whose hold upon life during all this long period seemed to depend upon a thread.

AN ADDRESS ON SPECIALISM IN MEDICINE.

Delivered before the Medical Society of University College, London.

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THERE was a time when every man was his own doctor, priest, and lawyer; and, with a due or undue regard to himself and his immediate relatives, may have exercised the functions of those three professions to the entire satisfaction of himself and of those about him. But the age of perfect capacity to do everything has long since passed—if a man would pay due regard to anyone but himself; and yet it is not so very long since that I have seen persons who thought themselves able, not only to do all these things, but to command the Channel Fleet, or correct telephonic apparatus with its last and newest improvements, if such delicate operations were only confided to their charge. But are such persons competent and sane? or are they self-important people, who are ignorant and crazy?

When knowledge was very small, people, and those who thought that they possessed it, were very great; since information has become very great, and the means for acquiring it are also vast, the want of wisdom and the power to use it may make men very small.

Some departure from the primal condition of man soon became necessary; and yet, not many centuries ago, the "wise man", the "seer", the "priest", was the person to whom those about him would go if there were anything wrong in their mind, body, or estate; and it was mainly to the priest that such appeal was made. He was the man who could give help in those rough times; and he often did so well: giving counsel to those suffering with morbid thoughts, and medicines to those with upset bodies, and advice to those who did not know how to arrange about their neighbour's landmark; and also comforting those whose hearts were tried about the meaning of it all, and the ending of it all in some other world than this. He was the only man who knew anything outside his own daily routine of work; and so he was not only the parson or priest, but the doctor and the lawyer.

But what have we now? There are so many professions, and so many subdivisions of the work of each of them, that time would fail me to say anything of any other than our own. The priest, the doctor, and the lawyer, have been distinctly separated in the general nature and character of their several lines of work; and yet often they follow their respective callings hand in hand, and with mutual help. And it is with no disrespect to either profession that I say it is not outside the experience of some that the priest feels the pulse, and occasionally asks questions which he might have left unasked; and sometimes gives drugs, often of harmless "homœopathic" sort; but sometimes does things, and more often says them, which may be mischievous; and that the doctor goes outside his vocation in the matter of prayers and tracts; and that the lawyer does not always see the distinction that the clergyman sees upon ritual or doctrine, or that the physician holds to be of importance in regard to public or domestic health. We know that it is so; but we might do well, perhaps, to regard these acts in the light of spasmodic activity of the organs left in a rudimentary state, in either one or the other, by the processes of differentiation, evolution, and specialism, that have brought us to the positions we now occupy. I draw a sharp and broad line between those three words and their outcome in modern present life. "Differentiation" means "division of labour"; "evolution" means its upward growth in utility to all; and "specialism" means its abuse.

With the expansion of human life, and the increasing complication of its requirements, division of labour becomes a necessity. The "simple cell", with its simple elements, may, as it does in some "low forms of organisation", as we term them, do all that the cell needs to do. But some cells, looking equally simple, have within them powers that necessitate, for their real use, a differentiation of those powers; and so, out of a "primordial cell", with some appropriate materials