

58. *New Treatment of Traumatic Tetanus.*—M. DEMARQUAY recently addressed a short communication to the Académie des Sciences, giving an account of a new mode which he has adopted of treating traumatic tetanus. Having, he says, during the late siege, lost many cases without being able to alleviate them, he resolved in future to try a new procedure. First bearing in mind the great susceptibility to cold manifested by these patients, and the aggravation of the suffering which this produced, he kept the two cases he now reports upon in a room heated to and carefully kept at a temperature of from 18° to 22° C. (64° to 72° F.). Next, in order to diminish the tonic and clonic contractions, which are in this disease so painful, causing the patient to assume such strange positions, and especially to subdue the trismus, which is one of the earliest manifestations of tetanus, as well as to relieve the pain of the wound and the convulsions of the stump, he performed, four or five times in the twenty-four hours, intra-muscular injections, as near as possible to the emergence of the nerves. These consisted of solutions of morphia diluted to a fiftieth part. At first each masseter was injected, as also the muscles of the neck on each side of the spinal column; and when the wound which had been the occasional cause of the tetanus was painful, an injection was thrown deeply into the substance of the muscles in its vicinity. Under the influence of these remedies the sufferings were speedily assuaged, and the patient was enabled to open the mouth, and by copious drinks relieve the tormenting thirst. By aid of these, too, and the raised temperature of the room, abundant transpiration was produced. After some hours the injections were repeated, the painful contractions being pursued wherever they appeared, throwing them into the substance of the muscles concerned. They were also made over the track of the nerves of the diaphragm, to subdue the spasm of this muscle, or along the course of the pneumogastric, with the view of relieving the difficulty of deglutition, which appears to depend upon contraction of the œsophagus. In this way the pains were assuaged and the thirst relieved, while the patient was able to be fed with broths, milk, and an increasingly substantial diet. One of the two cases was suffering when seized with tetanus from a deep wound of the calf in process of cure, while the other had undergone amputation of the leg. In both, the tetanus, to all appearance, was very severe; and although, of course, two cases do not say much in favour of any mode of treatment, their successful issue justifies its being made known. Frequent subcutaneous injections of morphia, atropia, and curare have been tried, but, as far as M. Demarquay is aware, no one has hitherto thought of carrying the curative agent deeply into the substance of the muscles. This is, he believes, to be both a novel and rational procedure.—*Med. Times and Gaz.*, Oct. 7, 1871.

59. *Transfusion.*—The *Dublin Journal of Medical Science* (January, 1872) contains two papers on this subject read before the Dublin Obstetrical Society, by Dr. A. H. Ringland, the other by John Ringland, M.D., with a report of the discussion to which the reading of these papers gave rise. Dr. A. H. Ringland's paper presents a very interesting history of the operation. Dr. John Ringland relates a case in which transfusion was successfully resorted to in a case of post-partum hemorrhage.

Dr. Robert McDonnell made some interesting remarks on the method of performing transfusion. He said "there were some operations, such as those for the removal of tumours and for aneurisms, &c., which could not be practised on the dead subject. There were others, of which transfusion was one, which could be thus practised; and that being so, it was inexcusable for any young surgeon not to avail himself of his opportunities to make himself familiar with the details of an operation which he might afterwards find necessary for the preservation of life. This was essentially an operation of detail. In the first instance perfect cleanliness was indispensable. All the instruments, the tubing, the pipette, should be perfectly clean; the bowl in which the blood was received should be scalded with hot water, and the muslin used in straining the blood should be scalded also. In the second place, the only really difficult part of the operation when it came to be performed was the opening of the vein in the person into whom the blood was to be transfused. It was like taking up a vein

in the dead body. There was this only difference between the dead and the living bodies—that in the latter, owing to the cold air getting at the vein, its muscular fibres contract, and it becomes very small. Hence the importance of passing a needle under it, so that one might always be able to find it when necessary. He believed that in both the cases that were detailed that evening the apparent difficulty found in putting in the blood arose from their natural anxiety to see it flow in quickly. You think the blood is not going in, when in reality it is going in, but very slowly. He had never found any instance, when practising on the dead subject, in which the weight of the blood was not of itself sufficient to make the blood run in without difficulty. The nozzle which had been described by him in the *Dublin Quarterly Journal* was an important part of the instrument.

It is of great importance to have a canula, with a probe point, and the eyelet hole at the side, not at the end. The probe point was best suited for entering a small opening. They could easily make sure that all air was expelled before they put it in, and if, during the progress of the operation, a bubble of air was observed, it was possible to withdraw it, and allow the air to escape without any serious interruption of the operation. There was another advantage in an apparatus of the kind exhibited, well illustrated in the case detailed by Dr. Ringland. There was some delay experienced in getting at the vein in the woman's arm when all was ready for making the injection. In such a case it was only necessary to place the nozzle in the top of the tube, and the pipette could then be placed in a can of hot water, and allowed to remain there as long as the operator wished. It was evident that this was a great advantage, inasmuch as everything could be got ready for use without undue haste, and the operation could be carefully and deliberately performed without fear of the blood getting cold. He believed this operation was capable of being applied to a large number of cases besides those with which the members of that Society were so familiar in obstetric practice. He hoped it might be applied both in surgical and medical cases, not only in cases where accidents or ulcers had caused copious hemorrhage, but in cases of the nature of chlorosis or of cholera. Where an injection of saline solutions into the veins might be considered advisable, the appliances, for the purpose of transfusion being now so much simplified, should encourage surgeons to lend their aid to physicians in cases of that kind. He believed the most important thing connected with this operation was the establishing the desirability of introducing *defibrinated* blood. "The risk of trying to inject blood not defibrinated was very great, and he was of opinion that the deaths which occurred several days after transfusion, occurred from embolism. He said then that, physiologically, the defibrination of the blood made it better for the patient, and surgically it disarmed the operation of most of its dangers and risks. With regard to the difficulty experienced in Dr. Ringland's case in getting the blood in, he was inclined to think that in all these cases it arose from their being rather precipitate, and thinking that the blood should go in faster than it really should. He had contrived a simple apparatus, by which a good deal more force could be put on, as in Bellina's apparatus by an India-rubber bottle; but at the same time he did not recommend it. It was important that the blood should not flow in too quickly, and he believed that gravitation alone was sufficient to get it in—at least gravitation aided by the pressure of the mouth. Care should be taken not to have the blood too hot. The operator should be provided with a thermometer in every case, otherwise he ran the risk of producing coagulation of the albumen. The blood should be heated from 100° to 105°, at which there was no risk of coagulation, and this temperature could be easily maintained.