

*On Puerperal Tetanus.* By WM. A. GORDON, M. D. Read before the Bristol South District Medical Society at New Bedford, Mass.

THREE cases of puerperal tetanus have occurred in my practice during the last five years, and they are the only instances I have had the misfortune to meet with during my professional life of now thirty-five years.

The first case occurred in a healthy, temperate Irishwoman, the mother of four children. I was called to her on Sunday afternoon, August 7th, 1859. I learned that she had aborted on Wednesday at an early period of pregnancy, eleven days previous to my visit. The abortion was not attended with very much pain or flooding, and the woman kept her bed only till the afternoon of the next day, Thursday. Since that day she had attended to the duties of the household. Upon the Monday following she went a short distance to market, bringing home a heavy basket of provisions without unusual inconvenience. On Wednesday evening, a week after her abortion, she sat a considerable time at the outside door upon the door-sill, her feet resting upon the stone doorstep. On the following day, Thursday, she made complaint of pain in the head, which extended to the jaws and throat. She took a dose of castor oil which operated on Friday, and from that time till Sunday she was using various remedies prescribed by the old women and midwives. At the time of my visit (Sunday) she complained of a painful stiffness of the jaws, which came on first, and had extended to the muscles of the back, between the scapulæ, and to the throat.

She could not open the mouth to protrude the tongue, and swallowing was difficult. Her intellect was unaffected; pulse natural; skin warm and perspiring. The lochial discharge had quite ceased. There was no pain of the back, or any symptom of metritis.

On Monday the muscles of the back of the neck became stiff and contracted, while those of the back were slightly relaxed. During the following days the tetanic spasms, which the patient called "cramps," increased, producing opisthotonos, and extending to the larger muscles of the limbs. Her condition at this time was very distressed, the spasms being severe, sudden, and extensive. She suffered much from the accumulation of phlegm in the throat which threatened suffocation, and was with great difficulty expectorated. She got very little sleep; complained much of general distress occurring in exacerbations. Her pulse became quicker and small, and her death occurred on Thursday afternoon. I was at this time not quite certain as to the nature of the case, it being the first one of this rare disease which I had seen.

The treatment consisted of purgatives of senna and salts, the application of large mustard poultices and hot fomentations to the scapular regions, with opium and calomel at bedtime, with an increase of the quantity of opium and of the doses as the spasms became more severe. These were discontinued, as she failed to swallow them, on Wednesday afternoon, and etherization resorted to. But she declared that it increased her distress, and refused to use it after I left.

The second case occurred in May, 1863. This patient was a mother of five children, a farmer's wife of excellent health and habits, aged about 40, I think. I was called to her on the evening of the 25th. She complained of pain low in the back, extending through to the abdomen, constant, at times aggravated. The abdomen was enlarged and tender, and she had considerable fever, also some hemorrhage from the uterus, though not severe. To my question whether she was pregnant, she replied that she did not know, but if she were, she should prefer to abort, and desired me to do nothing which should prevent it.

My treatment was directed to the removal of the symptoms of metritis, as I considered; and it was continued till the 28th, when I took leave of her. She was then free from pain and fever, and had only moderate hemorrhage; but abortion had not to my knowledge occurred.

About thirty-six hours after this last visit, on the evening of the 29th, I received another summons, and then found my patient complaining of stiffness of the jaws, neck, and throat. This soon extended to the muscles of the back, and all became affected by severe and painful tonic contractions. The trismus was especially distressing to her. Deglutition became increasingly difficult. The attempt to swallow was followed by severe spasms. Her death took place on the 30th.

The treatment was at first chloroform inhalation. But the patient, although apparently relieved, immediately upon regaining consciousness, expressed herself as feeling worse, and after a few trials it was laid aside. Large doses of Dover's powder and calomel were then exhibited, and strong turpentine enemata, with castor oil. During the last night of her life she was directed enemata of tobacco at intervals of six or eight hours; but only one was administered. Her death occurred on the morning of the 30th, less than 48 hours from the commencement of the tetanic symptoms. The

patient had not been exposed to cold in any manner; indeed, she had not left her bed since my first visit.

I learned after her death that she had undoubtedly been subjected to an operation for the procurement of abortion a few days previous to my first visit.

The third case occurred in July, 1863. My attendance commenced on the 24th of June. The patient was a woman of good health and habits, a mother of three children, aged about thirty-five. I found her flowing very freely, a condition which had existed for some hours. She was faint, but had slight pain. Cold applications were made, ergot and finally opium and acetate of lead and the tampon of sponge. The abortive process was completed, and I discontinued my attendance on the 29th. The woman I found on that day sitting upon the sofa, and I took my leave with many cautions as to exposure and exertion. Indeed, my advice was that she should remain in bed a fortnight.

Five days after, on the 4th of July, I was again called to this patient. She was in bed complaining of stiffness of the jaws and throat. Tetanic spasms soon followed, opisthotonos, with severe spasms of the limbs at times more severe than at others.

The spasms seemed to be controlled in some measure by the use of belladonna and lobelia in doses short of vomiting. Upon these remedies principal dependence was placed. Beef-tea and wine were exhibited as nourishment. The case resulted fatally on the 12th of July, eight days after the attack began.

Of these cases we may observe, first, that they occurred after abortion, in the early period of pregnancy, and all of them proved fatal. Second, although the first case might be supposed to have been owing to exposure to cold, the reputed cause of "idiopathic tetanus" in general, the second case could not have been so caused, as the patient had not left her bed after treatment for the metritis, to the time of the tetanic attack. Third, with regard to the retention of the secundines. In the first and third cases these had been discharged, while in the second they were retained. Fourth, the abortion was not produced in the first case, while in the second it is probable that it was procured by instrumental means, and in the third case stimulating teas had been freely drunk with the design of producing the abortion. Fifth, the disease occurred at very various periods after the phenomena of abortion came on, viz., in the first case in eight days, in the second in four days, and in the third ten days afterwards.

The following points of interest in regard to this disease seem to me, I will not say established, but rendered probable by these cases: That it is more likely to occur after abortion than after confinement at the full term; that it occurs whether the abortion may have been procured or not, and whether or not the secundines be retained; that it may occur and is most likely to occur within ten days of the commencement of the abortive effort. And, finally, that it is very dangerous, and generally fatal.

Upon an examination of those medical periodicals which my own library contains, I find but a single report of a case in this country in the *Ameri-*

*can Journal of Medical Sciences*, since 1827 to 1860. That case was reported by Dr. Storer, of Boston. It occurred after a confinement at the seventh month, September 20, 1841. The placenta, being adherent by its whole surface, was not discharged. Only three small portions of the size of English walnuts came away on the 26th of September. Tetanic spasms came on September 27th, seven days after the birth of the child, and occasioned death at midnight of the 28th. There were no symptoms of metroperitonitis, or any unusual symptoms or trouble until the 26th, when the doctor made an attempt to remove the placenta, and administered ergot with only partial success. The doctor seems to attribute the casualty to the retention of the placenta.

The same journal contains a notice of two cases reported to the Obstetrical Society of Edinburgh, in 1850. Both of these cases occurred after abortion; one seven days after the abortive effort commenced, in which death occurred on the third day. The second supervened upon an attack of tonsillitis. Stiffness of the jaws being complained of on the first day, which increased and was followed on the fourth day by tetanic spasms, which occasioned death in the afternoon of the same day. In this case the tonsillitis occurred in consequence of exposure, as was supposed, to cold, upwards of a fortnight after the abortion; and this was at an early period of pregnancy.

At this meeting, Dr. Simpson, of Edinburgh, observed that he had seen a woman die of tetanus after a uterine lesion. "In this case a very large, soft polypus was detached and thrown off by the spontaneous efforts of the uterus. A few days subsequently the patient had difficulty in opening her mouth. She died in course of fifty hours with all the symptoms of general tetanus." The same journal records that "in some of the Registrar-General's Reports two cases of death from tetanus after childbirth are noticed."

The *Medico-Chirurgical Review* notices, in the July number of 1849, the report by Dr. Aubinais, of Nantes, of three cases, two of which occurred after confinement at the full time, and one at seven months. One case resulted in death seven days after the tetanic condition came on. "The tetanus in this case seemed to have been induced by exposure to cold; the patient, with high milk fever, got out of bed and walked across a wet floor with bare feet. She was soon seized with shivering, difficult deglutition, and gradually the tetanic condition markedly prevailed."

In the second case, the patient had been bled during an attack of eclampsia. Delivery followed soon after at the seventh month; and on the fifth day, having drunk largely of cold water, she was seized with shivering, trismus, and finally complete tetanus. This patient recovered under the use of blisters alone, and warm fomentations to restore the lochia. The spasmodic symptoms did not give way for twenty days.

In the third case, the patient, four days after confinement, while in a

state of perspiration, exposed herself to wet and cold, suppressing the lochia. The tetanic symptoms occurred twenty-four hours after; became fully developed, and continued, obstinately resisting the most active anti-phlogistic treatment, until the tenth day, when they began to give way, and she recovered. She was bled six times, had one hundred leeches applied, and afterwards took musk and valerian.

These nine cases are all which these journals, the *American Journal of the Medical Sciences*, the *Medico-Chirurgical Review*, and *London Lancet*, have reported during the last thirty years. Of these only two occurred after confinement at the full time. The attack occurred within ten days, except in one instance in which a fortnight had elapsed. The disease proved fatal in all except two cases, and one of these, that which followed the eclampsia, might have been more of a simply nervous character. It continued twenty days, and is said to have yielded to blisters and warm baths. The other recovery was after excessive depletion, six venesections, and one hundred leeches.

These results hardly serve to vary the conclusions drawn from my own cases, while they serve to strengthen the point, *that no woman is safe from the attack for at least ten days after the uterine effort, whether in cases of abortion or of child-birth at the full time.*