ACUTE TUBERCULOSIS IN PUERPERAL WOMEN.¹

BY EMMA L. CALL, M.D., BOSTON.

THE various forms of septic infection play so large a part in the pathology of the puerperium that the influence of the puerperal state upon other diseases has hardly received the attention it deserves. It is true that for a long time it has been known that the zymotic diseases present peculiar symptoms in their course and development during this condition, but outside of these very little seems to have been recorded.

The effect of pregnancy and parturition upon cases of established tuberculosis has been much discussed, and equally good authorities are not agreed upon the subject, but the development of tuberculosis during the puerperium in patients who had no previous history or appearance of the disease is a subject upon which I can find very little information, and I have therefore ventured to think that the following cases are of sufficient interest to justify me in bringing them before this Society.

CASE I. Mrs. M., age twenty-seven, was delivered of her second child in the New England Hospital Maternity, April 12, 1896. The patient is slight and delicate looking. Her condition during pregnancy had not been good. She suffered much from indigestion, for which she was treated in the medical wards of the hospital in March.

Her first labor was tedious. Breech presentation. Child still-born.

The second labor, also a breech, was equally slow; delivery manual. The child proved to be an acephalous monster. Moderate laceration of the perineum, immediate suture.

During the first nine days after labor the patient was nervous and apprehensive; but the temperature was practically normal, reaching her highest temperature, 99.5°, at night a few times. On the tenth day the temperature rose suddenly to 104°.

Upon examination the perineum was found to be well united. Lochia normal. Nothing noticeable in pelvic organs except a slight sensitiveness in the ovarian region.

From April 22d to May 1st the average morning temperature was from 99° to 100°, the maximum (sometimes at noon, sometimes at 5 P. M.) ranged from 101° to 103°. She was removed to the medical wards of the hospital the 1st of May. At this time she felt fairly well, had neither chills nor sweats, and no apparent consciousness of fever. Her only tangible discomfort was a tendency to intestinal indigestion. Her appetite was fair. She lost flesh steadily, but not very rapidly.

An examination made at this time is recorded. Heart and lungs normal. Abdomen apparently normal; no dulness, distention nor sensitiveness in any part.

Pelvic examination: uterus in good position, involution fairly well advanced. No sensitiveness anywhere. The uterus, however, was not freely movable, and there was an ill-defined thickening in the region of the appendages, though no distinct mass could be felt.

Examination of blood: hemaglobin 60 per cent. Red corpuscles much diminished. Marked leucocytosis. No plasmodia.

¹ Read before the Obstetrical Section of the Suffolk District Medical Society, April 28, 1897.

Her general condition and temperature remained about the same during May. She was able to be up and to sit out of doors on pleasant days, and was usually very cheerful and hopeful.

On May 31st a decided increase in the maximum temperature was noted, with some pain in the abdomen, referred chiefly to the region of the ascending colon.

On June 4th an irregular mass was discovered in the right inguinal region, extending upwards to level of anterior spine, and downwards to pelvic brim.

No positive diagnosis had been made in this case, although abdominal tuberculosis had been suspected. Upon the appearance of this mass, a consultation was held with the attending surgeon, Dr. Culbertson, and an exploratory incision advised, which was consented to by the patient and her husband.

The operation was performed by Dr. Culbertson, June 6th. The report of the condition found was as follows:

"Uterus small, normal in position. Both sides of the pelvis filled by a neoplastic mass, apparently tuberculous, which on the right side reached the level of the liver, involving the ascending colon and some folds of the small intestine. The mesentery was also studded with tubercles. No ascites."

The abdomen was flushed with salt solution and closed.

The patient's temperature never rose above 101° and soon descended to normal. She left the hospital August 17th, having regained strength, flesh and color, and all traces of the mass had disappeared.

I saw her April 3, 1897. She looked in fine condition, and called herself perfectly well. Menstruation was regular and painless, and she had no discomfort in pelvis or abdomen.

CASE II. Mrs. D., age twenty-four, was delivered of her third child at the New England Hospital Maternity, May 14, 1896. Labor normal, no laceration. Child healthy. Family history negative. Physical condition during pregnancy good. General appearance healthy.

On the third day after labor, the temperature rose to 104°. She complained of headache. No cause could be assigned for the temperature. During the next two days the temperature ranged lower, then rose again, and on May 22d (eighth day) reached 103.4°.

A very careful pelvic examination was made; and although there was no tenderness, and the lochia appeared normal, the uterus was curetted, with negative result. An examination of the thoracic and abdominal organs was also negative.

From May 22d to 29th, the lowest temperature was 101°, the highest 104.4°. The temperature curve was very irregular, the maximum being often in the morning. The pulse ratio to temperature was slow. The patient complained of no pain, but was depressed and anxious, and perspired profusely.

During the week from May 29th to June 4th the average temperature was decidedly lower, the highest being 102°, the lowest 99°.

On June 4th the temperature rose to 105.6°, and for several days it touched 105° at some part of each day. She grew stupid, slept most of the time, her pulse was quick, often irregular, and, in short, she presented the appearance of one overwhelmed with some poison.

From the 9th to the 13th of June, the temperature again averaged lower, the maximum being 102°. She

took food well and seemed brighter, and the pulse was stronger and slower.

On June 16th a slight cough was noticed. No physical signs in chest.

On June 17th she had a chill, and temperature rose to 105.5°, followed by moderate phlebitis in right calf and thigh. On June 19th she complained of tenderness in right inguinal region, and the abdomen became distended. Internally there was some sensitiveness in right adnexa, but nothing definite could be felt. The lochia had ceased. The sensitiveness also disappeared in a few days.

During this time, although quite rational, she answered questions very slowly, as if it took a long time for the ideas to penetrate the sensorium.

On June 21st the cough became more troublesome, and a few sibilant râles were heard in the right lung posteriorly. The sputum was examined, with negative result.

June 23d. She complained of sharp pain in the region of the diaphragm, on the right side.

June 26th. She had severe pain in the right side of thorax below the scapula, and some friction sounds and fine râles were heard there.

From this time the signs of effusion (as manifested by dulness merging into flatness, distant respiration and diminished vocal resonance) successively presented themselves in the right side. There were also apparently patches of consolidation, presumably lobular pneumonia, above the level of the effusion.

In spite of the fact that no local focus of sepsis could be pointed out, this case had been considered as septicemia for lack of any other explanation. The phlebitis, the symptoms of peritoneal irritation, the local pleurites and pneumonia were regarded as secondary manifestations of the infection. Following this idea, the signs of effusion into the pleural cavity were supposed to indicate empyema, and aspiration was decided upon, with the idea of making a permanent opening in case pus was reached. On July 9th, aspiration was performed by Dr. Alexander and myself; but we only succeeded in drawing out about half an ounce of absolutely clear serum. It was therefore concluded that the physical signs were caused by a thick layer of plastic lymph between the chest wall and the lung. An examination of the serum by an assistant pathologist, Dr. Harriet Lothrop, disclosed the presence of the tubercle bacilli. Another examination of the sputum showed the bacilli there also, but not so abundantly as in the serum.

The diagnosis of tuberculosis having thus been established, the patient was permitted to sit up, and was carried out of doors on suitable days. She went home the last of July. At that time her evening temperature was still 102° to 103°, and we expected a rapidly fatal termination.

During August, I saw her once a week at her home in South Boston, where, in spite of poor surroundings, she improved decidedly. Her cough diminished, and she gained flesh and strength; the physical signs in the lung improved slowly but steadily.

In September she went to the Channing Home, where she gained ten pounds in six weeks; and soon after she left there I examined her chest and could find very little difference in the breathing between the two sides. This opinion was confirmed by Dr. V. Y. Bowditch, who saw her about this time. She had absolutely no cough, so that no sputum could be obtained.

I saw her last in January, and she seemed very well. I have since heard through friends that she continues so, although she has worked very hard all winter tending in a bake-shop from 5 A. M. to 9 P. M.

My interest in these two cases, which occurred within a month of each other, during my service, was further increased by Dr. Alexander, who kindly referred me to another case, which occurred in 1894; and I report this from the hospital records and the private notes of Dr. Alexander, who was at that time resident physician of the hospital.

Mrs. J. T., age twenty-four, American, primipara. Family history good. Health had been good till within the past two years, during which time she had suffered from a pain in left ovarian region, brought on, as she believed, by running a heavy sewing machine. This pain had been quite troublesome during pregnancy, and she was reported to have had a profuse and fetid leucorrhea.

Delivery occurred February 28, 1894, and was perfectly normal. No perineal rupture. Child healthy.

On the fifth day, March 4th, the temperature rose to 103°. No cause for temperature found in thoracic, abdominal nor pelvic organs. On March 7th she had a chill, and temperature rose to 106.8°. Another chill occurred on March 9th.

The patient was etherized, and the uterus curetted and washed out. Some shreds of decidua and placental débris were removed, but they were absolutely fresh in odor and appearance. The lochia had never been fetid. The patient's temperature continued high; there were occasional chills; later, vomiting, involuntary urination and defecation, and low muttering delirium.

Death occurred on March 20th, the twenty-first day after delivery.

The case was considered during life to be one of septicemia, with auto-infection from an old pus-tube (indicated by the persistent pain in the side and fetid leucorrhea). A post-mortem examination by Dr. Mallory revealed no pelvic lesion, but both lungs were completely riddled with miliary tubercles.

(The temperature charts of these patients were here shown.)

We have here three cases of tuberculosis, apparently developing during the puerperium, running a very acute course, two ending in recovery, the third in death.

I cannot find reports of similar cases in any of the text-books and journals which I have consulted. One reason for this may be, that until a comparatively recent period the diagnosis of these cases could not have been with certainty made during life. The diagnosis of Case I was decided by the exploratory incision, a method which in former times would have been considered inadmissible. The diagnosis of Case II could not have been made at all without the bacteriological examination of the secretions. Case III would undoubtedly have been called septicemia if no autopsy had been held. Since comparatively few fatal puerperal cases are allowed an autopsy, other similar cases may have passed unrecognized.

The first question naturally is, did these women present any evidence of tuberculosis before labor. The family history of all three is negative. The physical condition of Case I during pregnancy is reported as poor. She suffered much from indigestion. This might suggest that the tubercular deposit had already

begun in the abdomen. But she was for ten days under observation in the medical wards of the hospital about a month previous to her confinement, and during that time her temperature was normal, and there was nothing recorded to suggest the presence of serious disease. Moreover, there was no marked rise of temperature until ten days after labor.

I know that Osler, in his valuable article on "Tubercular Peritonitis," published in the "Johns Hopkins Hospital Reports," states that some cases run their whole course with a normal or even subnormal temperature, nevertheless, the usual rule certainly is, that fever is one of the earliest and most persistent symptoms of this disease.

The condition of Case II during pregnancy is reported as good, and her appearance confirmed the statement.

Case III had a history of pelvic pain extending through two years, but seems otherwise to have been in fair health.

While, therefore, it is impossible to prove the absence of previous tuberculosis in these women, there is no decided evidence in the affirmative.

What was the primary source of infection? Cases I and II had no contact with tuberculous patients during pregnancy, so far as can be ascertained, and no hereditary tendency toward the disease. Neither had any enlarged glands. Both were in humble but not destitute circumstances. I have no knowledge of the outside conditions of Case III. The suddenness and violence of the outbreak would seem to argue that some focus of infection must have existed which the conditions of the puerperium served to disseminate rapidly.

This question derives peculiar interest from the fact that the Fallopian tubes are now known to be comparatively often the seat of tuberculosis, and though this is in many cases secondary to deposits elsewhere in the body, there is evidence that in a certain number they may be the primary focus of disease. The conditions of the circulation during the puerperal period would be especially favorable to the diffusion of any infection having its seat in the genital canal.

Dr. J. Whittredge Williams, in his article on "Tuberculosis of the Female Generative Organs," read before the American Gynecological Society in 1892, says: "Genital tuberculosis is usually secondary to deposits elsewhere in the body, but in a considerable number of cases is primary in the genitals. Its frequency is much greater than is usually supposed. Only about 25 per cent. of tubercular tubes and ovaries are recognized as such by macroscopical examination. The symptoms are not characteristic: they may be entirely absent or vary from those of a simple catarrhal salpingitis, to the most severe form of pelvic abscess."

In regard to tubercular peritonitis, especially that which is usually complicated with more or less invasion of the pelvic peritoneum, the question whether the infection spread from the tubes upward to the abdomen, or *vice versa*, is of great interest.

In Case I the uterine appendages were apparently buried in the mass of tubercular inflammation. It will be remembered that some time before any evidence of the tubercular mass appeared in the abdomen there was an ill-defined thickening in the region of the appendages. I questioned this patient carefully in regard to any previous symptoms of uterine, or tubal

disease. The only one she gave was a bearing-down pain in the right inguinal region, from which she suffered very much during the whole pregnancy, and which in the early months was so constant as to make her fear a miscarriage.

In Case II the course of the symptoms suggested a diffusion of some poison in the right side of the pelvis, causing pain and tenderness there, then irritation of the peritoneum, diaphragmatic pleurisy, then costal pleurisy and penetration into the substance of the right lung. Here there was no evidence of any previous trouble in any part of the body.

Case III had a history of pelvic trouble and a fetid discharge, and a previous salpingitis was diagnosed from it, but at the autopsy nothing of note was found in the pelvis. At the same time, since the condition of the lungs amply accounted for the fatal result, it is quite possible that a minor degree of salpingitis might have been unrecorded, and as no macroscopical examination of the tubes was made, tubal bacilli cannot be absolutely excluded as a source of infection.

I do not wish to be understood as considering that I have any real evidence to offer as to the mode of infection in any of these cases. I have only endeavored to trace out the slightest clue, hoping it might lead to further investigation on these points in any similar cases.

How do these cases differ from those of ordinary so-called acute tuberculosis? These cases certainly present types of very acute tubercular infection, and two of them at least show a suddenness of invasion and a violence of constitutional symptoms seldom seen in this disease. On the other hand, the favorable termination of two out of three of these cases is very unusual. The time of invasion, the temperature curve and the absence for so long a time of any discoverable lesion makes them liable to be regarded as septic in spite of the absence of appreciable focus in the genitals, since repeatedly septic infection is known to have been diffused from a centre so small that it is not recognizable by ordinary examination.

It is possible that some of the obscure cases of fever in the puerperal woman now and then reported may have been of tubercular origin.

This paper is intended to call the attention of physicians to the peculiarities of the tubercular disease as here displayed, and in the hope that it may bring out reports of similar cases, rather than with any idea of drawing deductions on the subject, since the cases presented are too few to justify this. It seems to me reasonable, however, to feel that there is evidence that some women at least are peculiarly susceptible to the infection during pregnancy and the puerperium, and that special pains should be taken to guard them while in this condition from known sources of infection, such as the contact with tuberculous patients, either in their homes or lying-in hospitals.

THE RECORD BROKEN.—What appears to be an authentic case of a woman who has given birth to four pairs of twins has been reported in St. Louis, Mo. The woman in question, who is only eighteen years of age, has lived in East St. Louis during the past five years and recently applied to Dr. Woods, Supervisor of the Poor, for food for herself and children, of whom all but three are dead. Dr. Woods carefully investigated her statements and found them correct.