

## PREGNANCY COMPLICATED BY TYPHOID FEVER.

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As a complication of pregnancy typhoid fever is rarely seen, as is shown by such reports as those of the Guys Hospital Lying-in Charity, in London, for 1888, where over 25,000 confinements are reported with no cases, and in the report of the Lying-in Hospital, in New York, for 1897, where over 10,000 confinements are recorded, also without a case. In both of these institutions the women are cared for in their own homes, and although they are not under constant observation, still they almost invariably send to the hospital whenever any illness occurs. It can, therefore, be reasonably supposed that these two large collections of consecutive cases, in the first instance covering a period of ten years, and in the latter a period of six years, were uncomplicated by typhoid, either during pregnancy, labor, or the puerperal state. That it does occur is without question, but its frequency can hardly be estimated from the comparatively few cases that have been published.

The following case was sent to the writer for care during her confinement, shortly after she became pregnant. She was examined at this time, and nothing abnormal found.

About a month later the patient walked into the office, complaining of severe headache, considerable bronchial irritation, with cough, but no expectoration; temperature, 103°; pulse, 138; bowels rather loose. She was sent immediately home and put to bed, a diagnosis of typhoid fever being made. Tub-bath treatment was instituted as follows: Whenever the temperature reached 103°, the patient was placed in

a bath, 68° to 70° F. These baths were unaccompanied by any reaction of a disagreeable nature, such as chilliness or any sign of prostration; the bowels moved regularly every day without medicine, and the patient enjoyed the milk diet, a glass being given every two hours. At night, being somewhat restless, trional was given to produce sleep, but not until the thirteenth day was it deemed necessary to administer stimulants and then but a drachm of whiskey was given every three hours. Trional was stopped on the twentieth day, and on the twenty-eighth day of her disease, or after ten days of normal temperature, she ate a chop, and one week later resumed her full diet.

The typhoid fever was uncomplicated, ran a regular type, and would be of little interest were it not for the fact that the patient was at the time four months pregnant.

Her obstetric history is as follows: A primipara, twenty-four years of age, with a history that menstruation began between the ages of fourteen and fifteen, that this function had always been performed regularly, with no abnormal symptom, her personal history being negative, although her family history is markedly tubercular.

The present pregnancy, up to the time of the onset of the typhoid, had been uneventful, except for the ordinary nausea which took place during the first few months, and even this was of the slightest degree.

Naturally, anxiety was felt as to the result of the fever upon the pregnancy, and the uterus was watched with the greatest interest. On three occasions dur-



ing the height of the fever uterine contractions took place, lasting an hour or more. No definite cause for these could be ascribed, except an effort on the part of the uterus to expel the child. The treatment was the application of ice-water stupes over the entire abdomen. The result was that each time the contraction ceased and all bad symptoms disappeared. The convalescence from the typhoid fever was rapid, everything possible being done to aid it. A trip to the country, with the absence of care, anxiety, and the very best of food, gave promise that no ill effects would occur.

Three months later, in the seventh month of her pregnancy, without any apparent cause, she at the time feeling perfectly well, and having been so for some time, developed continuous headache, and examination showed albumen in the urine, but no casts. She was immediately put upon a milk diet for a period of a week, being watched in the meantime in order that no serious symptoms might suddenly arise. At the end of this time headaches remained, and the urine showed no improvement, the amount for the twenty-four hours being thirty ounces, and the analysis as follows: acid, specific gravity, 1.022; albumen, Esbach's test, a gram to the litre; urea, 0.014 c.c.

Her condition not improving, after consultation it was decided that, as she had reached the eighth month of pregnancy, the viability of the child was unquestioned, and, for the sake of mother and child, it was deemed safest that labor be induced immediately.

This was done by the introduction of a silk elastic bougie through the cervix, between the membranes and the uterine wall to the fundus. Strong uterine contractions began within six hours, and the patient was delivered of a 6½-pound boy twelve hours later. Ten days later an examination of the urine showed it to be normal in quantity, but albumen still present. All symptoms had disappeared. Three months later the urine was normal, and both mother and child were in perfect health.

Seven months later, supposedly from something which she had eaten, she developed a general urticaria, accompanied by moderate fever, but a great deal of discomfort, which disappeared under treatment within a week. An analysis of the urine at this time revealed a trace of albumen, specific gravity 1.022, and the presence of hyaline, granular and epithelial casts in moderate number, the urea being slightly diminished.

Since that time her health has been very good, and

no further symptoms have arisen.

Griffiths reports a case in which the first symptoms of the fever, spots, and so forth, occurred ten days before the delivery. On the day of delivery her temperature was 103°; pulse, 130. Delivery was easy and normal; two days after delivery she became maniacal for twelve hours. The duration of the disease was not given in this case, but both mother and child recovered.

Treatment, cold sponging (much appreciated), milk, and brandy.

Baum reports an Irish woman, twenty-six years, III para, first symptoms began in twenty-seventh week of pregnancy. Epistaxis, characteristic eruption, and stools being present; temperature, 103°; pulse, 112. Hygienic surroundings of patient very bad. Treatment, tonic doses of quinine, sponge baths, tincture ferric chloride, ten drops every third hour. Six days after treatment was instituted labor began and terminated normally in the birth of a good-sized male babe in a state of asphyxia. For two weeks after birth "he remained remarkably dull," says Baum. "After delivery . . . her pulse quickly fell to 92 per minute, the skin became moist, and the temperature fell to 98.2°. Delirium ceased, and did not return. . . . After the delivery she made a rapid recovery, both as to the typhoid fever and the puerperal condition."

Ashburn reports the case of a young white woman, twenty-two years, who had had one child. Brought to the hospital after two weeks' illness with fever, diarrhoea, and cough, and strong typhoid history. Examination on admission showed her to be about seven and a half months' pregnant. The treatment instituted was tub-baths of a temperature of 80°, two to four a day. Fourteen days after admission her child was born. It was a male, and measured 37.4 cm. in length and weighed 1,030 grams, nails well developed. "It lived for about half an hour." The placenta was rather small, and came away intact. Into one side of it there had been a hemorrhage, involving a strip about one inch wide by five inches long. The patient's temperature remained high after the labor, and she was sponged several times, with, apparently, little effect; later, he says: "Then followed another peculiar feature in the subsidence of the fever by crisis twenty-four hours after the miscarriage, and its continuance for four days between 94° and 98° by the mouth, and then gradually rising to normal."

Through the kindness of Dr. W. C. Deming I am able to report another interesting case which occurred



in the State Emigrant Hospital:

M. H., age, twenty-two; German; admitted December 29, 1889. No previous history given. On admission, temperature, 103°; the next morning, 100°, rising again to 103° in the afternoon. This continued until the ninth day after admission, when it fell to normal in the morning, going up to 101.5° at 6 p. m., and at midnight falling to below 98°; from this on to the twenty-first day the temperature remained about normal until delivery of child, on January 18, 1890. Just before labor began temperature rose to 100°, and within twelve hours to 104.4°. Labor was normal except for moderate hemorrhage after third stage of labor. The chart shows a temperature ranging from 101° to 105.8° from time of labor until death, on twenty-first day of disease. It is unfortunate that the history is not more complete, from the fact that the autopsy showed ulceration of Peyer's patches.

Freund and Levy report a case in which the typhoid developed at the fifth month of pregnancy, the fœtus coming away in the fourth week of the disease. It died immediately after the cord was cut. It is not noted what was the result to the mother.

Touvenaint's case of typhoid was seven months' pregnant. Curiously enough, the child, although born prematurely, survived, while the mother succumbed to the disease.

Jaggard, in Hirst's "American System of Obstetrics," states that "Typhoid fever occurs with greatest relative frequency during the early months of gestation. It is a very rare complication of the puerperium. The tendency to the interruption of pregnancy is more marked than in any of the acute infectious diseases, with the possible exception of small-pox and cholera. Abortion rather than premature labor is observed. . . . The causes of abortion or premature labor are found in the elevation of maternal temperature, the hemorrhagic endometritis, the depression of maternal blood-pressure, with asphyxiation of the child. . . . The transmission of the infection from the mother to the child must be regarded as possible, although not demonstrated. The maternal prognosis depends largely upon the stage of the disease in which the interruption of pregnancy occurs. If the interruption of pregnancy occurs early in the course of the disease the outlook is naturally more favorable than if the event takes place later, when the patient is in a critical state of exhaustion."

Cazeaux says: "Though I have rarely had occasion to observe typhoid fever during pregnancy, I have fre-

quently seen it occur during the lying-in. Its commencement is usually insidious, the first symptoms having always been those of a puerperal inflammation, and presenting all the characters of the typhoid disease only after the lapse of the first few days and the disappearance of the abdominal symptoms. What is very singular, if I may judge by the cases which I have observed, the typhoid fever, so far from being influenced unfavorably by the puerperal state, is even less grave than in the ordinary conditions of life. Not one case of seventeen of typhoid fever supervening a few days after delivery proved fatal."

LeGendre, in ordinary uncomplicated typhoid fever, objects to a routine treatment of cold water alone. On the other hand, where the disease is a complication of pregnancy or the puerperal state, he believes it to be most important in preventing interruption of pregnancy.

Parvin, in 1886, says: "The importance of antipyretics, especially when the temperature reaches 104° F., is plainly suggested by what has been said as to the danger to the fœtus, as it has a still higher temperature than that of the mother."

Winckel believes that typhoid fever seldom occurs in pregnancy. He says: "I have observed it only three times during gestation and once in the puerperium. Two of the pregnant women were confined prematurely; the one exhibited the roseola very distinctly, and died on the seventh day of the puerperium; the other two recovered, one of them by crisis. The other patient was affected with typhoid about the seventh or eighth month, but went to term, and had an easy delivery during convalescence; the child lived and was vigorous; placenta marginata, slight fever in puerperium; recovery. In the fourth case the first increase of temperature appeared as late as the tenth or eleventh day of the puerperium, when the woman was on the point of leaving her bed. . . . Typhoid occurs more frequently in the earlier than in the later months of gestation, and causes interruption of pregnancy in more than half of the cases. The splenic tumor may by bursting cause sudden death in pregnancy, in labor, and in childbed. . . . The treatment of typhoid in pregnancy is the same as in the non-pregnant state. There is no indication for inducing abortion or premature labor, since it is unnecessary in the milder cases, and occurs spontaneously in the severer ones. Tepid baths, packs, enemata, and nourishing food are chiefly indicated, besides the internal use of antifebrin."



From the foregoing reports it is shown that typhoid fever is as liable to occur in a pregnant woman as in a non-pregnant, and at any time from the first month of gestation to the end of the lying-in period. Some lay claim to the fact that it is more likely to occur during the early months of pregnancy. But this is far from proven, and is, indeed, denied by some of good authority. The fact that typhoid fever is a complication of pregnancy does not seem to imply that its effects are more serious to the mother than when gestation is not present. On the other hand, the effect upon the child is most grave, as in at least two-thirds of the cases pregnancy is interrupted. Many of the cases reported are lacking in detail of treatment, and it is, therefore, impossible to say how many of the cases re-

ported have been treated by the application of cold for the reduction of high temperature. That this treatment when pregnancy is present gives the best results is clearly shown by the majority of observers, the result in the author's case being a very strong example of its good effect. It would be interesting to see a series of cases systematically treated upon the cold-bath plan, or, at least, where cold applications were directly applied to the abdomen upon the slightest symptom of abortion or premature labor, for it is the author's belief that the cause of interruption of pregnancy is, without doubt, the hyperpyrexia, and that this treatment would reduce the infant mortality in a great degree.

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