PUERPERAL FEVER, AS SEEN BY THE GENERAL PRACTITIONER.

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Puerperal fever is an acute febrile disease of women occurring in connection with child-birth, and is due to a septic infection. I would also include fevers caused by similar infections following abortions or miscarriages.

I select this subject for several reasons: 1. Its importance to mankind. 2. Its frequency in general practice. 3. Because of our inability in many cases to render any assistance, and to be compelled to witness the death of a young mother in the prime of life and otherwise in perfect health. 4. I believe a discussion of puerperal fever by this society will be of benefit to us all.

While examining applicants for life insurance, one thing strikes me very forcibly, and that is the cause of death of the mothers and grandmothers, as given by the applicants. It appears to me that nearly one half of the female relatives die of child-birth. On inquiry I find that many of them died in from five to ten days after delivery, and that some were attended by midwives, some by physicians, and some by no attendants at all.

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I do not believe now, nor at any time in the past, that there is any reliable way of securing statistics on cases in general practice, as there are very few death certificates that read "puerperal fever." Many such cases are reported under the terms pneumonia, peritonitis and heart failure.

I will now relate a short history of several cases occurring in my own practice, which I hope you will feel free to criticize and discuss. I have not taken them in any order, but have picked out only such cases as I thought would be most instructive.

Case I. Mrs. K—, age 35. Previous good health, fifth confinement, instrumental delivery. On the fourth day the temperature suddenly rose to 104°, pulse 140 and weak, with chill and delirium. She was immediately put under an anesthetic and curretted by means of the finger, and douched with a 1-2000 bichloride solution, and packed with iodiform gauze. Some foul smelling placental tissue was removed. The next day the temperature was normal and there were no chills. No farther douching was used and she rapidly recovered, with no after effects. She has since given birth to two children.

Case II. Mrs. W—, age 44, four previous confinements. Her children are all young men and ladies, most grown. She has not been pregnant for years, but thinks she is and begins to probe for relief. When called I found her with a slight temperature, 102°, pulse 140. On examination I found the uterus enlarged, indurated and immobile. Pain extended all across the lower portion of the abdomen. I curetted with a dull curette, removing some decidua, and washed out with a solution of creoline. The temperature stayed around 102° and pulse 130 to 140 for two weeks. I douched the uterus daily and occasionally used the curette to see if I could not loosen something that would let the temperature drop. I applied hot applications over the distended abdomen day and night. I gave opiates for the pain and tonics, including quinine and strychnine to allay the cold sweats. I kept her in bed for six weeks, when she gradually recovered. For several years she has been insane on the one subject of the sexual organs and talks it continually to the members of her own family and to callers, whether male or female.

Case III. Mrs. M—, age 38, primapara; instrumental delivery; hysterical at times. Immediately following delivery she was attacked with chills, temperature normal, pulse 80. During the course of the second day she had three or four chills and no fever. The fourth day, chills and a temperature of 102°; breasts quite hard

and painful. I examined the vagina, and curetted and douched the uterus. There was no odor, the flow was normal and nothing secured by the curetting. I did not repeat the uterine douche but began the use of tonics. Several times during the first two weeks, after calling on her and finding the temperature and pulse normal, before I had time to reach my office they would come running after me telling me that she was having an awful chill and they thought she was dying. On returning I would find her shaking the whole bed with chills, her temperature still normal and pulse good and strong. The nurse informed me that she would cry for hours at a time and declare that she knew she would never get well; that she was sure she had blood poisoning and the doctor would not tell her. She slept very little. Under these conditions I gave her thirty grains of bromide and ten grains chloral every hour until she would go to sleep, and by keeping her asleep about half the time the chills became less and less and complete recovery followed in about four weeks.

Case IV. Mrs. M—, age 25, second confinement, instrumental delivery, still birth. Everything went normally until the sixth day, when the nurse telephoned me to come at once, that my patient had a temperature of 105° with severe headache, and was having a chill. I arrived about half an hour afterward. In the meantime she passed a large clot of blood, the size of two fists, the odor of which was so offensive that the nurse was unable to stay in the room. The temperature had dropped to 102° by the time I arrived, and under the circumstances I decided to make no examination, but to await developments, in the hope that all cause of trouble had been removed by nature. The temperature immediately fell to normal and and recovery was uneventful.

Case V. Mrs. H—, age 26, primipara, attended by midwife and in labor two days. I was called on the fifth day following delivery. I found the patient delirious and moaning with pain in the abdomen, temperature 103°, chills and profuse perspiration, pulse 140. I found the abdomen greatly distended and tympanitic. The midwife said the patient had been bloated for two days. I at once curetted and douched with creoline. The cervix was soft and dilated and the scrapings of the uterine discharges were very offensive, but scanty. I applied hot antiseptic dressing over the abdomen, gave opiates for the relief of pain and stimulants for the heart. I used the intra-uterine douche at intervals of six hours. Nothing came away after the first washing. The temperature continued to rise,

the pulse became weaker and weaker, pain was constant and the delirium and moaning became less and less and was followed by unconsciousness and death on the second day after I saw her.

Case VI. Mrs. T—, age 38, sixth confinement. Patient quite corpulent, birth natural, at full term. Delivery occurred before I arrived and the placenta was readily removed by pressure over the fundus with slight traction on the cord. No vaginal examination was made before, during or after the delivery. On the following day she was taken with chills and profuse perspiration. I learned that she had had three or four chills previous to confinement and that for three or four weeks she had been perspiring profusely when sleeping; that one month previous she had diarrhea, lasting about one week, followed by constipation. I gave 5 grains of quinine and 5 grains of blue mass, in capsule, every four hours for forty-eight hours. The stools following were very frothy and very offensive and burned the rectum like so much hot water. The third day there were very slight chills, with a temperature of 100°. I gave quinine and strychnine in tonic doses and recovery was complete within two weeks.

Case VII. Mrs. H—, primipara, age 20. A case of induced miscarriage at about the sixth month. When I called I found her suffering with severe labor pains and in a few hours she was delivered of a six months' fetus and the placenta. For the following three days things appeared normal. On the third day she had chills, temperature 104°, pulse 160. I curetted and removed some offensive decidua and douched with creoline. The pain in the abdomen was severe. The temperature remained between 102° and 104°, pulse 120 to 200, and pain with profuse perspiration and chills lasted for nearly two months. I continued using the intra-uterine douche two and three times a day, sometimes using creoline, sometimes peroxide, and sometimes lysol, but apparently nothing made any improvement; there was a creamy discharge when washing out the uterus, otherwise no discharge. So I determined to fight it out along the line of ridding the uterus of as much pus as I could. I gave internally ergot, brandy, iron, quinine, strychnine, digitalis, nuclenic acid, etc.; continually used the hot applications over the abdomen, and twice a day the nurse gave a vaginal douche as hot as could be borne by the patient, continuously for half an hour at a time. During the third month the temperature gradually went to normal, and it was fully five months before the patient practically recovered. In eight months she was as well as ever, and has remained so for the last three years, but in that time has not been pregnant.

Case VIII. Mrs. L—, age 32, primipara, a case of induced abortion at the fourth month. When I was called she was having labor pains, no fever and no dilatation of the os. I prescribed rest in bed, with opiates and viburnum. The pain continued, fever developed, and on the next day she aborted. On the third day the temperature rose to 103°, pulse 140 and weak, severe pain in the lower part of the abdomen. I curetted and douched with creoline. The fourth day the temperature was 100° to 104°, pulse 140 and weak, the patient was sitting up and her general appearance was good. Everything progressed favorably, with recovery in sight, until the twelfth day, when I was again called. She had been taken with chills, the temperature was 104° and rapidly reached 105° and 106°, pulse rapid and weak. There was severe pain in the abdomen, great perspiration and an anxious expression. Collapse and death followed in a few hours. The vaginal discharge had been normal until a few minutes before she died, when she told the nurse that something broke inside of her. On examination there was found a discharge of about a pint of pus through the vagina. I was unable to secure a post mortem.

Case IX. Mrs. W—, age 30, colored. Her general health had been poor for some time. When called, I found her with labor pains, no fever, no dilatation of the os, and denying the fact that she was pregnant, stating that she had been unwell regularly every month. She was placed in bed and given opiates for the pain. I was again sent for in the afternoon and when I arrived found a four months' fetus lying in the bed. The placental tissue was easily removed and everything went fine until the fourth day, when she complained of pain and stiffness in the muscles of the neck. Temperature 99.5°, pulse normal and strong. On the fifth day the pain and stiffness increased, including the muscles of face, neck and chest, with inability to swallow spittal or even open the mouth. She was somewhat chilly at times and the temperature did not run higher than 99.5° any time that I saw her. There was no pain in the abdomen, no odor to the flow, and the fever being so slight and the pulse good and strong, I decided there was no indication for a curettement. I had counsel with two good physicians, one expressing the opinion that she was suffering from muscular rheumatism, the other that she was suffering from cerebrospinal meningitis. And I confess I did not know what she was suffering from. As she was entirely dependent upon the neighbors for nursing, after considerable persuasion I finally secured the consent of the husband to take her to a hospital

so that she could receive better care. She arrived at the hospital and, while on the examining table, died. The hospital authorities telephoned for the coroner's physician immediately, and on such information as he could secure from the husband in regard to her symptoms he decided it was a case of tetanus, and refused to make a post. So I am still in doubt as to the cause of death.

Case X. Mrs. G—, age 35, Irish. Had had five previous confinements, all instrumental deliveries and all still births, the children being of immense size and apparently in perfect condition. She had tried several physicians in the hope that some one could deliver her of a living child, and it came my turn to see what I could do. When called I found her in severe labor pains, which continued for some time, with no progress but a fully dilated cervix. Knowing of her previous difficulty, I decided to use instruments at once. I applied a strong, firm pair of instruments, after cleansing the patient, and I put in two hours of as hard work as I ever did in my life, and was unable to deliver the baby. I removed the forceps and put the patient fully under an anesthetic. I then forced the child's head back and grasped its feet with my hands and produced version. After another hour of toil I succeeded in delivering a fourteen pound child in apparently perfect condition, but could not resuscitate it. I then washed the uterine cavity with a 1-3000 bichloride solution. All was well until the fourth day, when she was taken with chills, rapid pulse and a temperature of 103°. I at once curetted and douched with a bichloride solution of 1-2000. I secured very little from the uterus, but that was quite offensive. The temperature went higher, the chills were more severe; the temperature from 104° to 106°, and at one time 107°, and pulse 140 to 200. The chills were nearly continuous and at times would be so severe that it would take the assistance of three or four men to hold her in bed, and the perspiration would form little streams as it was excreted. I continued the douching every six hours, using mostly creoline and sometimes peroxide, but for the first ten days nothing apparently would reduce the temperature. There was a creamy pus discharge at each douching, but none during the intervals. When using a 25 per cent solution of peroxide it would be very active and would force itself out through the cervix in spurts of foam and froth. I gave a goodly supply of French brandy, which she relished, and ergot as a uterine tonic. At the end of fourteen days the temperature began to subside and at the end of four weeks the patient had recovered. One year later she gave birth to a living child, which is now three years old and in perfect health. She has had two still births since.

Case XI. Mrs. W—, age 40, has three children. When called I found her with a slight chill, pains in abdomen, temperature 103° and pulse 140. On inquiry as to what was the trouble, she said, "Same old thing." On examination I found the os slightly dilated with a fetal head protruding. I packed the vagina quite snugly, and returned again in the afternoon. On removing the packing I found that there was completely delivered a four months' fetus. I curetted to remove the placental tissues and douched with lysol. Recovery was complete and the patient was up in three or four days. The temperature immediately dropped to normal as soon as the birth canal was cleaned, which proved it to have been the focus of infection.

Case XII. Mrs. Y—, age 28, primipara, strong, robust, and quite corpulent. Instrumental delivery, otherwise normal. Pain in the abdomen began immediately after delivery and lasted four weeks. The temperature ranged from 100° to 102° and 103°, with slight chills and headache. I curetted and douched out several times. The first time I removed some apparently placental tissue. Subsequently I could secure nothing but shreds of decidua. I gave quinine, strychnine and ergot, and still the temperature stayed up. She was taken to a hospital and was again curetted by a gynecologist, still the temperature stayed for another week. During the fifth and sixth week the temperature gradually went to normal and recovery followed.

Case XIII. Mrs. B—, age 58, has six children, robust and strong. When called I found her having a chill, said she had been shaking and cold all day. Temperature 103.5°, pulse 140, headache, no cough and no pain. Monthly periods regular, but scanty. I was at a loss to account for the trouble. I inquired when she last menstruated. She admitted that she was then flowing some, but it was five days overdue, and she further admitted she had become afraid and had assisted with some slippery-elm probes. I at once curetted, without an anesthetic, securing nothing but some clotted blood. The temperature dropped to normal within twelve hours. I gave ergot, fl. ext. 20 min. every three hours. Without any further interference recovery followed.

ETIOLOGY.

Not many years ago puerperal fever was ascribed to a suppression of the lochia. Later it was ascribed to the transmission of a poison from the milk in the breast that was carried to the peritoneum and was followed by disastrous results. It is now generally considered as traumatic in origin, resulting from septic matter coming in contact with the inner side of the uterus, where, after delivery of the child,

dilated veins and lymph channels abound; or the septic matter may come in contact with some portion of the vaginal wall, where lesions are very commonly produced during labor. In some cases the poison is introduced from without, and in others from within, the result of putrefaction of retained placental membrane, and sometimes the fetus itself.

There are various ways that the poison may be carried from without, as by the finger of the physician or midwife during the examination previous to the birth of the child; from the use of unclean catheters, dirty bedding and napkins, or it may come from the external genital organs, and may even come from bad air when the woman makes frequent trips to the toilet during the course of labor. The bacteria gain entrance to the system and there produce toxins, and the effect is what we call puerperal fever. With few exceptions, bacteria can not vegetate in the vaginal canal for any length of time under normal conditions. Bacteriology has demonstrated to us the various kinds of germs that are involved, but I do not believe has added much to aid the general practitioner more than is already known empirically.

At the present time no scientific man questions the life saving value of cleanliness in obstetrics, as well as in surgery. This fact is becoming more firmly fixed in the minds of physicians in general, and only within the last few years has mortality begun to decline. Epidemics have vanished, and instead of being a reality, what our mothers used to say, "that every pregnant woman already had one foot in the grave," a confinement well managed has been robbed of many of its dangers. In spite of the precautions physicians use, there are many more cases appearing today than should be.

In order to arrive at the number of cases occurring today, let any physician recall how many cases have occurred in his own practice and that of his acquaintances, and then let him realize that he can know personally of only a few of the labor cases.

Physicians for obvious reasons do not parade their cases of puerperal fever before the public, and when they suddenly find one on their hands they get a few twinges of conscience, if they have one, and at once cast about for something to which to attribute the trouble. Many of them inform the relatives and friends that the patient must have taken cold or eaten something that did not agree with her, in an effort to clear themselves, and should the patient die they do hope that the people will take it as a matter of "it was to be" or the "Lord saw fit," etc., and let it go at that.

Many microscopic examinations show that the normal vagina contains very few bacteria, if any, and that those which are there are very inert on account of the strong germicidal action of the vaginal secretion. During the progress of labor the vaginal walls are bruised and injured, and thus their resisting power is decreased, and as new germs are carried in during the progress of labor the parts become infected immediately after birth. Nature furnishes safeguards of a very effective kind against infections. By the discharge of the liquor amnii the canal is washed out; by the passage of the child's head the vaginal wall is scrubbed, and the descent of the placenta, and the various discharges all tend to rid the canal of any germs that might have been introduced previously.

SYMPTOMS.

The symptoms are somewhat variable and dependent upon the degree of fever which generally develops in from three to five days after delivery, and in some cases as long as ten days. The first symptom is a slight headache. If this is followed by a chill and fever, we must then look for the cause. The pulse becomes rapid and feeble, increasing from 120 to 160 or more. The temperature rises to 103° and 104° and higher; the skin becomes hot and dry, an anxious expression appears on the face, and frequently there is vomiting and diarrhea; the tongue becomes coated with a heavy fur; frequently there are acute pains in the abdomen and considerable distention and tympanitis. The secretion of milk is generally arrested, although sometimes the breasts are hard and painful and may mislead one as to the cause of the trouble. If the fever remains high the patient soon becomes delirious, breathing short and hurried, and the chills increase in severity and the fever continues to rise from day to day, accompanied by a profuse perspiration, that leaves the patient in a weaker condition after every chill, and finally coma and death ensues.

DIAGNOSIS.

The breasts should be carefully examined, the bowels should be thoroughly moved in order to eliminate the question of absorption of putrid feces. It should be ascertained if the patient has any suppurating wounds, fistulas, running ear or abscess anywhere. In the absence of any of the above mentioned sources of infection in a woman suffering during the puerperal period from headache, irregular chills and fever, with or without pain in the abdomen, it is safe to conclude that you have a case of puerperal fever, and when you have located a primary focus of infection in the uterus or vagina, the diagnosis is positive.

PROGNOSIS.

The prognosis varies with the amount of poison already absorbed and the ability to remove the nidus of infection. If too serious inroads have not been made upon the strength of the patient and the cause can be removed, recovery will take place. Otherwise, the prognosis is grave.

PROPHYLAXIS.

This is of the utmost importance and one should always keep in mind the source of the disease. The physician should avoid every means of carrying septic matter to the patient. When labor is about to begin the rectum should be unloaded of all fecal matter, the patient should be given a tub bath with soap and warm water, and particular attention should be given to the cleaning of the external genital organs and the anus. The external genitals should then be washed with some antiseptic solution, as bichloride, lysol, etc., and covered with a sterilized gauze pad. Greater safety would be assured if the parts were shaved, but very few general practitioners, outside of a hospital, could do this and hold their practice. Clean clothing is to be placed on the patient and clean bedding on the bed. After once getting cleaned up, the patient should not be allowed to use the water closet, and after each evacuation of the bowels the parts should again be cleansed. Sterilized napkins should be used, and not, as is frequently the case, the nurse going to an old closet to fish out of the dirt and rags some old castaway clothing, and without even washing it, applying it to the vulva, dirt, dust, filth and all.

ATTITUDE OF THE PHYSICIAN.

A very potent and active cause of infection lies in the imperfect cleansing of the hand of the physician or midwife who comes in direct contact with the patient. Many cases of puerperal fever have been traced to the introduction of pathogenic germs by the examining finger of the physician who, in the course of his daily work, may have become contaminated with germs of diphtheria, scarlet fever, suppurating wounds, and other infectious material, and in this way the hands of the physician may carry the most dangerous poison that could be brought in contact with a pregnant woman.

His hands should be scrubbed with a brush, green soap and hot water for at least eight to ten minutes, and then washed in some antiseptic solution. Every-day clothing should be completely covered with an apron kept expressly for such cases. When once cleaned the hands should not be allowed to come in contact with anything not sterilized. Under no circumstances should a physi-

cian go directly from a case of erysipelas or diphtheria to attend a woman during labor. The danger is greatly lessened by making as few vaginal examinations as possible. Some physicians even go so far as to advocate no vaginal examinations at all but instead to use abdominal palpation and even rectal examination. This method of conducting a labor case by the "mere laying on of hands" I do not think would be very successful to the business of the general practitioner. However, much can be learned by a vaginal examination that could be learned in no other way as to the presentation and progress of the case. To my mind examinations during the course of labor are indispensable and no harm can be done if sufficient care is exercised to secure perfect cleanliness of the hands, and the precautions in regard to cleaning the patient are observed. The utmost care should be taken to avoid leaving even the smallest piece of placental tissue or membrane in the uterus. As to the real value of antiseptic vaginal douching following delivery as a prophylaxis remedy, the profession are not of one mind. I believe that washing out the blood and uterine discharges that accumulate in the vagina for several days following delivery is of benefit in that it removes culture media upon which the growth of germs depend. However, if the douching is left to the nurse, she should observe all the rules of cleanliness and antisepsis practiced by the physician, otherwise I believe it better left undone.

The use of ergot immediately following delivery for several days I believe to be of service because it has a tendency to force out any placental tissue and blood clots, also in contracting the uterine wall firmly and in so doing reducing its power of absorption.

Since it is impossible for the bedding, clothing, the private home, and the physician himself to be in an aseptic condition; and even after using all precautions that we can control in regard to cleanliness, puerperal fever will crop out frequently and must be dealt with vigilantly and at once.

When, in spite of using all means possible to produce cleanliness and aseptic surroundings cases of puerperal fever still develop, the question arises in our minds, why are there not more cases among the filthy and unclean.

Not long ago I was called to a case of adherent placenta, which the midwife said she could not remove. The cord had been severed from the placenta by traction and she said she had inserted her hand and pulled as hard as she could on something she supposed to be the afterbirth. The feather beds on top and underneath were

covered with blood and had the appearance of having been used for several generations without ever being washed. I called for hot water and began the usual scrubbing. After washing my hands awhile the midwife remarked, "You wash very much," and showed me her hands, which were coarse, fissured and full of dirt. I inquired if she did not wash her hands, and she replied that she had had no time; that she was milking the cow and feeding the chickens when they came for her to come quick, and as they were in a hurry, she rinsed her hands in cold water under the faucet and proceeded to assist in the confinement. I removed the placenta, having to separate every portion of it with my hand, douched out with creoline solution and went home with fear and trembling, but in three days' time the woman was up and doing her own work. It appears to me that in some of the filthy cases the system has become accustomed to combat germs and filth and thus many cases escape infection, while others that are scrupulously clean are sometimes affected.

While writing this paper a physician friend of mine informed me of a case of puerperal fever that occurred recently in one of the finest hospitals in the city and in a special maternity department, in the midst of the best antiseptic surroundings and antiseptic precautions. As Dr. Frank Earle used to remark, "such things do occur in the best regulated families."

TREATMENT.

Any elevation of temperature after the delivery calls for a most careful investigation, and the woman's condition should be thoroughly studied to eliminate, or discover, some other cause for fever than an infection of the birth canal. As soon as the conclusion is reached that the trouble is in the genital organs the whole canal should at once be thoroughly disinfected, and in every case the secundines, if any, removed. When the discharge is foul smelling it indicates a mixed infection and the first step should be to empty the uterus completely, using a dull curette small enough to reach all parts of the uterus and then wash out all loosened patches by using a recurrent uterine douche tube attached to a fountain syringe or siphon. Great care should be used not to injure the uterine wall or protrude a curette through its wall into the peritoneal cavity. Some writers claim a safer plan is to anesthetize the patient and dilate the os, if necessary, and curette with the finger, and thus eliminate the danger of injury to the uterus by the use of instruments.

When called to attend a case of puerperal fever the method of

procedure is as follows: The tenaculum, dull curette and intra-uterine douche tube are to be boiled in water for fifteen minutes. The arms and hands of the physician are to be thoroughly scrubbed and disinfected. His ordinary clothing should be covered by a clean obstetrical gown. The patient is then placed in a dorsal position across the bed, with the buttocks resting on a rubber pad at the edge of the bed, the limbs supported by assistants, who, in general practice, are generally some inquisitive neighbor women that run in as soon as they know the doctor has called; or by supports that will hold the limbs flexed on the abdomen. The external genital organs are scrubbed with tincture of green soap and hot water and washed with an antiseptic solution. The vagina is then douched with the same solution. The anterior lip of the cervix is grasped by the tenaculum and by gentle traction the uterus is drawn down and with a small dull curette the walls are quite thoroughly gone over in all directions. Then insert the douche tube and wash out all loosened particles with a good supply of some quite hot antiseptic solution as creoline or lysol. The curettement and douching repeated again and again until nothing comes away but bright blood. If there is a tendency to hemorrhage and the uterus is quite soft and flabby I pack quite full with plain sterilized gauze and instruct the nurse or attendant to withdraw it within a few hours so as not to obstruct the normal drainage too long. It may be necessary to repeat the uterine douche several times a day for many days. Very seldom is it necessary to repeat the curettement unless the chills persist and the fever remains high. Drainage is necessary the same as in any other infected wound, and if the uterus does not readily drain itself it can be assisted by a gauze drain or by a tube. In most cases an anesthetic is not necessary, and if the general symptoms are quite severe, with a weak pulse, I think it is not safe to give one. Ergot should be given so as to stimulate and tone up the uterine muscle, so that it will contract and compress the blood vessels and lymphatics, and in so doing diminish absorption of any poisonous products still in the uterus. If there is much gastric disturbance ergotine may be given hypodermatically.

In addition to local treatment, as described, the patient should be given liberally of good, nourishing food, consisting of liquid or semi-solids. The medical treatment should be stimulating; strychnine is indicated for its tonic effect and combined with digitalis for a heart stimulant when the pulse becomes weak. The bowels are to be regulated, and if there is diarrhea or frothy or very offensive stools

some antiseptic should be given. For pain, opiate in some form can be given and bromide and chloral when necessary for rest and sleep. Rest in bed and absolute quiet are essential. I could never see any beneficial effect from alcohol in any of the cases in which I have tried it, and yet Hirst and some other writers recommend giving as much alcohol as can be consumed without becoming intoxicated.

The treatment in a nut-shell is to clean the genital canal and to persistently keep it clean, and to assist the general system in overcoming the poison previously absorbed. I have never used anti-streptococcus serum, as there are so many reported cases of failures and death following its use, and until I have more proof of its success I will be content to follow the old adage, "Be not the first by whom the new is tried, nor yet the last to lay the old aside." I have arrived at the following conclusions from the cases I have here reported and others that I have not mentioned that have occurred in my own practice.

1. If there occurs at any time following the birth of the child, or miscarriage, a temperature of 101° or over, with no apparently assignable cause, a thorough examination of the perineum and vagina should be made.

2. If the examination of the perineum and vagina give negative results, the uterus should at once be examined by using a dull curette, and if any blood clots or placental tissue are discovered they should at once be removed by the finger or curette and the uterine cavity douched with some mild antiseptic solution.

3. If the temperature and pulse return to normal after one curettement there is no indication for its repetition.

4. If the temperature is partially reduced following the curettement, the uterine douche alone should be continued from one to four times a day, depending on the severity, or until the temperature goes to normal.

5. If the chills persist and the temperature remains high after the curettement, I would repeat it once daily until the temperature is reduced or until nothing can be secured from the uterus but bright red blood.

6. In my experience the majority of cases are immediately checked by one curettement and the temperature drops to normal in a few hours.

7. That puerperal fever following abortion has proven more serious in my hands than that following a full-time confinement.

8. That chills during the puerperal period do not necessarily indicate septic poisoning from any source.

9. That the use of a rubber glove on the hand during the examinations would lessen the liability of carrying in infection.

10. That the use of a bed pan in the reclining position is not for the best interests of the case, but instead the patient should be assisted to an erect position to urinate and for bowel movements, and in this position drainage is assisted.

In the year 1843 Oliver Wendell Holmes published a paper on puerperal fever, and I will close by reading you his closing paragraph: "I have no wish to express any harsh feeling with regard to the painful subject which has come before us. If there are any so far excited that they ask for some word of indignant remonstrance to show that science does not turn the hearts of its followers into ice or stone, let me remind them that such words have been uttered by those who speak with an authority I could not claim.

"It is a lesson rather than a reproach that I call up the memory of these irreparable errors and wrongs. No tongue can tell the heart-breaking calamity they have caused; they have closed the eyes just opened upon a new world of love and happiness; they have bowed the strength of manhood into dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it, with less cruelty, the death of its dying parent. There is no tone deep enough for regret, and no voice loud enough for warning. The woman about to become a mother or with her new-born infant upon her bosom should be the object of trembling care and sympathy wherever she bears her tender burden or stretches her aching limbs. The very outcast of the street has pity upon her sister in degradation when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law brought down upon its victims by a machinery as sure as destiny is arrested in its fall at the word which reveals to her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life to plead for her in the hour of peril. God forbid that any member of the profession to which she intrusts her life, doubly precious at that eventful period, should hazard it negligently, inadvertently or selfishly."

87 NORTH FORTY-EIGHTH AVENUE.