recently observed, is that an increasing number of cases are to be found in children and it has been found that some of these have occurred in children who have become infected through drinking "gutter-water." The report made by Dr. Dock has been of special interest as going to prove the wider distribution of the disease in the north.

DR. JAMES J. WALSH, New York—During the past year at least two cases of true amebic dysentery have been reported in New York City. One of the patients had not been outside of New York City for years, the other had never been out of the city. It seems, therefore, that the ameba has crept as far north in its endemicity as New York City.

DR. E. LIBMAN, New York—At Mt. Sinai Hospital we have encountered a large number of cases of amebic liver abscess. During the past three years we have examined specimens from at last ten cases of this kind in which no history could be obtained of any residence outside of New York City.

DR. DOCK, in closing—I should have mentioned in my report that I excluded any possibility of infection from soldiers who returned from Cuba or the Philippines. Since the Cuban war there have been a number of cases of tropical infections from returned soldiers. In view of the wide spread of the disease, the vague symptoms that are present and the absence of the symptoms known as dysenteric, it is very important that all stools be examined more carefully than they have been in the past. Finding the organisms early gives a better basis for making a prognosis than anything else.

WHAT CASES OF PLACENTA PREVIA CAN BE BEST TREATED BY CESAREAN SECTION?*

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It is not my intention to go over the whole subject of placenta previa and the various methods of treatment, because this has been done so thoroughly in the past two years as to be unnecessary. It is worthy of remark, however, that the importance of this condition has been forcibly brought home to the profession by the advocates of Cesarean section, and the treatment of this serious condition has taken on new interest.

At the time when I reported¹ the first entirely successful Saenger-Cesarean section for placenta previa there was little on record of value regarding the frequency and mortality in the various forms of this complication. At that time I had delivered but one case with placenta previa, and that only partial, in which rupture of the membranes allowed the head to engage, and mother and child survived, but I had in mind other cases with less happy results. All the statistics, however, that were available emphasized the serious nature of certain forms of placenta previa. The study made at that time of the literature bore out the statement made "that this was the most fatal complication with which the obstetrician had to deal, and under the most favorable conditions (meaning by that the results of well-conducted lying-in-hospitals) and in the hands of experts, showed a higher death rate, fetal and maternal, than almost any other obstetrical condition." The statistics, it is true, as later writers² have stated, were old, but the obstetric teaching in regard to this subject was no more modern, at least, so far as treatment was concerned.

It is not necessary to go over the entire ground on which the resort to Cesarean section in certain cases was held justifiable, but a review of those indications in the light of subsequent additions to our knowledge of the subject will be of interest.

The indications appeared to be as follows:

1. Cases of complete previa.
2. Cases of previa in primiparæ when signs of fetal or maternal exhaustion are evident.
3. When the condition of rigid os is present.
4. Where there is a history of previous operative delivery.
5. In transverse positions and in cases of prolapsed cord, if the cord is not easily returnable.

Advocating section for these conditions is far from advocating section for all cases of placenta previa, as my paper has been quoted. We should not proceed too fast in the advocacy of new treatment, and while the surgical invasion of the obstetric field has only begun, I do not believe that section will be accepted as a cure for all obstetric complications until we admit that the pains of normal labor should be accepted as indications for interference.

The paper read by Dr. Gillette³ at the meeting last year was a notable contribution to our knowledge of this subject, and his statistics of mortalities show that the condition is still a serious one. His report of the results of 216 cases in the hands of various men show 34 mothers lost, or a death rate of 15 1/3 per cent., and 96 children, or 44 1/3 per cent. As to the variety of implantation, there were 88 cases of centralis, 20 mothers lost (22 8/11 per cent.); while 66 children were lost (70.5 per cent.). Of the other forms of implantation (partialis and marginalis), 128 were reported, with 14 deaths for the mothers, a death rate of 11 per cent., and 41 of the children, or a death rate of 31.5 per cent.

Shauta⁴ in a recent article, while arguing against section, gives the following figures: Placenta previa centralis, 50 cases, with the death of 9 mothers (18 per cent.), and 35 children (70 per cent.), while in 184 cases of partial previa he lost 7 mothers (3.8 per cent.), and 92 children (50 per cent.). These statistics do not differ from those quoted in my original paper, of Jardine,⁵ who (1896-8) reported 12 complete, with 16 2/3 per cent. maternal deaths and 66 2/3 per cent. fetal, except that they are enough higher to prove that it is even more fatal than we originally believed.

In primiparæ this condition can not be said to be so rare as not to require consideration, as it occurs in about one in eight cases of previa. Fry⁶ in reporting 14 cases, reports 7 cases in primiparæ.

Reason would seem to indicate that operative interference in primiparæ must be slower and more difficult than in multiparæ, because of the firmness of the parts.

It has been said, however, that the os with placenta previa is more easily dilated than if normal. This statement, however, should be changed, for there have been cases enough reported and evidence enough adduced in the past two years, to warrant the statement that the os is more easily torn than normally, while doing manual dilation and extraction; in fact, there are many cases of spontaneous rupture of the uterus in the presence of placenta previa.^{7 8}

Schultze,⁹ in a discussion of uterine rupture, gives as a cause paralysis of the region of placental insertion. He refers to the fact that during pregnancy the uterine wall develops less in the portion where the placenta is attached than elsewhere, and that when the placenta is adherent, the portion of the uterine wall left after its separation is thin. Failure of this area to contract he terms paralysis of the area of placental insertion.

Anatomically no part of the uterus is more liable to rupture than the lower segment during labor, not only on account of the retraction of the muscular fibers of the uterus and the consequent thinning of the lower

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. H. Cordier, W. E. B. Davis and Henry P. Newman.

segment, but to the causes of rupture as pointed out by Schultze. If spontaneous rupture is not uncommon, what may we expect with forcible dilatation and delivery?

The history of previous operative delivery in the case of a normal pregnancy has led men of great experience to advocate broadening the indication for section in cases with lesser degrees of pelvic contraction. The study of 1000 cases by Dobbins and Williams¹⁰ shows most clearly the importance of a history of operative delivery in considering the treatment necessary in future pregnancies. These conclusions were: "that it is the border line of disproportion between fetal and pelvic diameter that we get the worst results for the fetus and it is the border line cases that are most frequent. First the fetus is shocked by severe forceps compression of the brain; then the heart is shocked by the manipulation of the cord necessary in version, and finally, if it still lives, it must run the gauntlet of asphyxiation." Admitting for the sake of discussion that many babies are small and not absolutely at full term, let me ask how a severe operative delivery helps a child already severely shocked and enfeebled?

In the past two years there is hardly a city in this country in which Cesarean section for some condition has not been performed, ranging from rigid os to eclampsia, and everyone is familiar with the ease and success of the operation. During the same time the number of craniotomies has grown steadily less, due not only to the improvement in surgery, but to the profession's awakened conscience.

When Dr. Ford¹¹ of St. Louis, in 1892, advocated Cesarean section in certain cases, on purely theoretical grounds, he did so when the death rate from most abdominal operations was still very high, but he was convinced that the do-nothing or the uncertain and indefinite methods then in use might be well superseded, in a large number of cases, by an operation which even then was promising the brilliant results it has since obtained. The most important point on which a resort to section was based was the fact, that we have to deal with two patients, and our whole duty is not conscientiously performed if we deliberately sacrifice or neglect the interests of the one in favor of the interests of the other. The discussions of the results obtained in the treatment of placenta previa which have been brought out in the past two years, are very important, for before that time the reports of large numbers of cases were few and in many instances combined old pre-antiseptic results with later ones, in such a manner as to be of little use in forming proper judgment.

What has been the sum total adduced by the advocates of no change from old methods? The gradual lowering of maternal mortality has been brought about by the sacrifice of larger and larger percentages of children. Fry⁶ reported 14 cases treated as follows: Bi-polar version and slow extraction 9 times, membranes ruptured and delivery left to nature once, tampon and natural delivery once, forceps extractions 4, including one application after coming head. All of the mothers recovered and 5 out of the 15 infants were born alive. Of the infants lost, 2 (twins) were not viable; one, in fact, was at the seventh month of utero-gestation and 4 were dead when the case came under observation. The death of 3 infants occurred during delivery.

Let us consider his cases briefly, the kind of placenta with which he had to deal, as these cases are among the few that are recorded in a manner to permit study:

CASE 1.—Edge of placenta felt, membranes ruptured, live child.

CASE 2.—Placenta tissue felt, tampon, child dead.

CASE 3.—Mass of placental tissue hanging down behind symphysis, delivered by forceps, child dead.

CASE 4.—Primip., 5 months' pregnancy, twins, central placenta. Placenta perforated with finger, fetus seized and brought down. Fetus slowly extracted as far as the head, which was imprisoned by the undilated os. Traction made downwards and the skull opened with a pair of scissors; head collapsed and extracted. Second fetus found in utero treated in same manner.

CASE 5.—Central placenta previa, tampon, followed by version. Dead infant slowly extracted.

CASE 6.—Os slightly dilated, placenta felt; bipolar version. Slow extraction. Infant dead.

CASE 7.—Primip., full term. Here no labor pains; placenta felt at os. Bipolar version. Infant extracted dead.

CASE 8.—Placenta felt at os; 8 months' pregnancy. Infant extracted dead. Bipolar version.

CASE 9.—Labor set in at term with eclampsia. Head presented with os dilated, placenta attached to left side. Forceps applied, dead infant delivered.

CASE 10.—Placenta presenting. Bipolar version. Child extracted dead.

CASE 11.—Placenta presenting. Bipolar version. Infant born alive but died next day.

CASE 12.—Placenta felt at os. Bipolar version and extraction of a living child.

CASE 13.—Placenta could be felt through os. Bipolar version and extraction of the after-coming head with forceps. Child recovered.

14. Placental mass in left side, head presenting. Forceps applied and living child extracted, which died next morning.

Two cases (1 and 14) edge of placenta felt, one delivery normal after rupture of membrane, one by forceps.

Ehrenfest,¹² in his paper on "The Impropriety of Cesarean Section in Placenta Previa, with Remarks on a Rational Method of Treatment," the major portion of whose bibliography is later than 1898, arrives at the following conclusions: "Saving the child's life should be one of the main tasks of the obstetrician, but it must not be forgotten that there is an indisputable rule that the mother's life ought to be valued higher than the child's. We can not deny that the excellent results of the modern treatment of placenta previa have been gained only at the expense of fetal life. We can not deny that the result of this treatment in regard to fetal mortality is very unsatisfactory."

Dr. Harris¹³ at the Pan-American Medical Congress reported nine cases treated by rapid manual dilation, followed by delivery, with only three children saved.

Zinke¹⁴ gives his fetal mortality in placenta previa in 40 cases as 55 per cent., but he does not give an analysis of the position of the placenta.

Stetson,¹⁵ in his report of 1000 labors, gives the results of the treatment of five cases of placenta previa, as follows:

CASE 1.—Complete. Ergot, full doses. Rapid dilatation; version; forceps.

CASE 2.—Partial previa. Dilation; version. Child dead.

CASE 3.—Partial previa. Dilation; version. Forceps.

CASE 4.—Placenta covered os. Dilation; version; forceps.

CASE 5.—Six months' pregnancy. Child dead.

These are not cases selected to prove or disprove any position, but are the most recent of published American results. If necessary to take figures obtained under the very best hospital conditions abroad, to prove that in the hands of the most skilful, the child can expect little, let us take the figures of Shauta,⁴ given under date of Feb. 26, 1902, and we find little change from those already given. He says: "The fetal mortality with our present treatment is a high one because we treat expectantly and

refuse to perform immediate extraction as a procedure dangerous to the mother."

Out of 234 cases of placenta previa, 127 children were lost, a percentage of 54. There were 35 deaths in children in the 50 cases of placenta previa centralis, 70 per cent., leaving 92 cases of placenta previa of varied types (excluding placenta previa centralis), 50 per cent. mortality.

The question we should put to ourselves in dealing with placenta previa is this: Are we justified in advocating and performing an operation which may have a slightly higher death rate for the mother, but which offers 95 chances in 100, at least, to a fetus alive at time of operation?

The profession in this country certainly have answered this, and have answered it affirmatively in substituting Cesarean section for craniotomy and premature delivery in cases of pelvic obstructions, both of which procedures have an extremely low maternal mortality, but a very high fetal. And again, how many of our practitioners are willing to uphold Leopold¹⁶ when he says: "In private practice, owing to unfavorable surroundings, craniotomy, in contracted pelvis, is preferable to Cesarean section." When the fetal heart is weak he perforates.

The unfavorable surroundings in private practice, of which Leopold complains, are not looked on in this country as contra-indicating conservative midwifery, and it is by reasoning on conditions prevailing abroad that the opponents of Cesarean section for any form of placenta previa in this country make their greatest mistake. Then, by giving us the statistics and results of hospital cases in expert hands, they so minimize the danger, to the student, that every graduate in medicine looks upon himself as competent to treat any case of placenta previa in private practice, until some frightful experience teaches him differently.

If the success of American midwifery is not a sufficient refutation of the treatment proposed by Leopold, think over in your minds the thousands of successful capital operations which have been performed in private houses, for every conceivable condition, before deciding that section in private practice is not justifiable.

Has the child a right to its life? This has been so thoroughly considered in years gone by, in discussing craniotomy, that it hardly seems necessary to discuss it again, but if the child has a right which forbids the direct taking of its life, "is there anything but a difference in degree between perforating the head, an operation which we know will destroy the child and in performing an operation which of itself will result in the loss of one-half to four-fifths of the children."

Williams¹⁷ says, in discussing contracted pelvis: "If we are operating solely in the interests of the mother, induction of labor appears to be a very excellent operation, but under the circumstances, why not do abortion at a much earlier period, and save all the weary months of pregnancy?"

We may well ask, to what would such a process of reasoning lead if accepted? It is urged that a large proportion of these children are not at full term; that may be so, but in over 90 per cent. of reported cases the child has lived in utero beyond the period at which it is viable, and all the children delivered by Cesarean section in the presence of placenta previa since 1899 have been delivered alive and have lived a certain length of time afterwards, as follows:

Tait;¹⁸ child lived one month, dying of bronchitis. (Porro.)
Donoghue;¹⁹ 2, 1900, both alive. (June, 1902.) (Sanger.)
Hare;²⁰ 13 days, inanition. (Sanger.)

Gillette;²¹ 1, alive. (Porro.)
Covington;²² 1, alive. (Sanger.)
MacCalla;²³ 1, alive. (Porro.)
Matoli;²⁴ who did Cesarean section after trying to pack vagina, lost child. (Sanger.)

The resort to a Porro I do not believe to be indicated in a case of previa, unless otherwise complicated, any more than it is in cases of contracted pelvis.

Andrews,²⁵ in summarizing his paper on "Cesarean Section vs. Craniotomy," says: "I will say that craniotomy on the living fetus is very, very rarely justifiable, unless the choice of the mother to sacrifice the life of her unborn child, rather than subject her own life to a slight risk, renders it justifiable." If the mother has, in cases like placenta previa, or pelvic obstruction, the right to decide what treatment the attending physician shall employ, to the end that she shall not then be exposed to any danger, that her child may live, or shall have the right to demand an operation (Porro) that she may not again be exposed to the dangers of pregnancy, why has she not the same right to decide that any given pregnancy may be attended with more danger than she desires to risk, and call for its termination at any time she may elect? How many of the profession are willing to act as passive agents in carrying out such treatment?

The failure of the uterus to contract does not seem to be a good indication for a Porro. I believe that many cases of excessive hemorrhage will disappear if the operation is not performed with one eye on the time and the other on the field of operation.

In my cases, after removing the child from the uterus. I have waited and allowed the uterus the same time to contract and retract that I would allow if conducting a normal delivery. This I believe to be very important, and if, as in some cases, there seems to be danger from the loss of a small amount of blood, I would free one edge of the placenta, put a gauze wick through into the vagina and close uterus and abdomen, leaving placenta to separate later. The danger of ventral hernia following operation does not seem to be important if the incision is made through the rectus muscle and properly closed.

CONCLUSIONS.

Cesarean section in certain cases of placenta previa has a fairly well-defined standing; its limits can not as yet be accurately defined. At present it seems that the conservative Sanger should be performed in cases of:

1. Complete previa.
2. Previa in primiparæ in the presence of severe hemorrhage or a rigid os.
3. Where there is a history of previous operative delivery.
4. It should be considered in all cases of placenta previa where version is indicated if a reasonably skilled surgeon is available, and only an ordinary obstetrician.
5. All of these indications are based upon a probable viable child, 28 weeks of gestation and upward.

When the pendulum swings from the excessive amount of surgery taught in the medical school, to the proper teaching of obstetrics it may be necessary to revise these indications. While, aside from this, a man, as soon as he becomes an expert obstetrician, finds it to his advantage to gradually work into something better, for, as Dr. Price has expressed it, "There has never been a premium on practical obstetrics."

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DISCUSSION.

DR. RUDOLPH W. HOLMES, Chicago—I have dabbled in statistics, and I am positive that they are of only relative value unless they demonstrate the results of one body of men in a large hospital service; the gathering of case results from promiscuous sources never can give positive criteria to found a working hypothesis; seldom does a man report a fatal termination unless there be unique features about the case. In placenta previa statistics are absolutely worthless as regards mortality or method of treatment unless there be a clear differentiation between the several types of previa—the lateral, partial and central. The mortality of lateral previa is low; speaking very broadly, it is exceptional for lateral previa to terminate fatally, only when the type approaches the marginal form does its portent become more grave. Central previa, on the other hand, is always potentially very serious. In lateral previa it is not possible to lay down positive rules of conduct—often more or less temporizing measures will secure favorable results; more drastic procedures are reserved for special indications. In the central previa we may lay down very clear and positive principles which will answer for nearly all cases, but the treatment is always an active one. At this time I think it is a most pernicious teaching to advocate Cesarean section in central previa; it is a continuation of that *furor operativus* which so held the gynecologist some ten years ago. The first thing to do is to develop the treatment of placenta previa for the average man. When he knows that, then we can begin to talk of Cesarean section in selected cases, but as yet we do not know the possibilities of the obstetric treatment. To-day, perhaps, the most faulty treatment for placenta previa is the tampon, but for the general practitioner, the man with little or no obstetric technic, a well-applied tampon will give him the best results. I would be distinctly understood that I do not advocate the tampon for the obstetrician, but for the practitioner who has not the skill acquired by practice in operative obstetrics, or an adequate obstetric armamentarium at hand: teach students how to build a proper tampon, and much of its ignominy will disappear.

The best results of the future in central previa will come from the timely introduction of the colpeurynter, followed by internal version, or an early Braxton Hicks version. The cardinal principle should be to perform version as rapidly as is consistently possible, and to make the extraction as slowly as possible. Rapid extraction is the explanation of many a death from deep cervical laceration, and is the explanation of many a so-called rigid os—both being dependent on extraction before dilatation was complete. The high mortality of previa is due to hemorrhage and infection; the treatment as outlined above will do away with many deaths due to the former, and a proper application of asepsis will entirely eradicate the second. The possibilities of the future are well exemplified in the recent figures of De Lee, who reports 31 consecutive cases with one death, and this one death was a neglected midwife case.

It is a most egregious error to compare the percentage mortality of Cesarean section as usually given for the operation done on pelvic indications with the fatality when done for placenta previa. The usual figures, 5 per cent., mean results in selected, uncomplicated cases. Combining favorable and un-

favorable cases together will still show a mortality of nearly 20 per cent. in Cesarean section; this latter figure was given me a short time ago as the mortality in the Ohlshausen clinic by one of his assistants. The fact is that the specialist rarely receives placenta previa cases first hand; the general practitioner gets them, wastes valuable time, and finally sends for the obstetrician, who must then do the section, if this new teaching is to be adopted. I would lay stress that the time never will come when the Cesarean operation in placenta previa will mean an uncomplicated case; it always will be an unfavorable indication for section. He who will compare the operation done on pelvic indication with that for placenta previa, he who will declare the mortality of previa treated obstetrically is 20 or 25 per cent., and surgically only 5 per cent., is dealing with the worst kind of sophistry. After the operation the woman still will be subjected to the dangers of post-partum hemorrhage—it will be necessary to tampon the uterus, which can not be effectively done through the uterine incision, so the only course to pursue will be to do an hysterectomy. Cesarean section for placenta previa should only be permissible in contracted pelvis, and placing the relative indications somewhat higher than usual, and in old cicatricial contractions of the parturient canal where extraction would be hazardous. I agree that Cesarean section when done early will save more babies, but so long as 10 per cent. of babies born alive die within the first twenty-four hours, so long as nearly 25 per cent. die within the year, and 52 per cent. before fifteen, I claim the woman's life is worth more than the baby's, and her chances should receive the first consideration.

DR. G. T. HARRISON, New York—I would like to raise my voice against the use of any such operative interference as that for the treatment of placenta previa. The principal thing is to save the life of the mother; the child is a secondary consideration. All efforts should be extended to save both, but if the interests of one must be weighed with those of the other, the mother's interests should be considered first. I have the same opinion of statistics as Dr. Holmes. I recollect very well the witty remark made by Dr. Sims years ago when arriving at statistics on ovariectomy. He said: "My young friend had 100 per cent. of recoveries." "How is that?" said somebody. "Why he had only one case, and that got well." That was only a witticism, but there is a great deal of truth in it. Statistics can not be relied upon. A very good point was made by Dr. Holmes when he said that a Cesarean section is absolutely contraindicated when the patient has been examined, and when there is any fear of infection. In the greater number of cases you can fear infection, especially if the ordinary practitioner of medicine has examined the patient beforehand. I would not dream of performing a Cesarean section if the case had been examined before, unless it was an expert who did it.

The main thing that should catch our attention is that our efforts should be directed to diminishing the frightful mortality of the child, and I think experience has fully demonstrated that in treating these cases by slow extraction after a Baudelocque version, that if we ignore the child and consider only the mother, we will save more children and more mothers. We ought to save all the mothers, and by proper precautions we can. I have had a large experience with placenta previa, but I have never lost a mother, so that my statistics are very satisfactory. A large per cent. of the babies died. Of course, the great danger in these cases is the danger of infection, but that is largely eliminated by present methods.

The reader of the paper intimated that even when the head came down, danger from hemorrhage was to be considered. In all cases when the head comes down it stops the bleeding by acting as a plug. In those cases you have no trouble in the way of hemorrhage, and you can wait for dilatation, and when you put on the forceps it is just as easy as any other case.

DR. HUGO EHRENFEST, St. Louis—In discussing this subject, some mention was made that the time was approaching when Cesarean section would be the only proper treatment in placenta previa. Another gentleman said it would be the school treatment of placenta previa. To-day the indication is rather

limited, but not limited enough. It should be that no conservative Cesarean section be made in a patient who has been examined by someone who has not been clean.

Another question is how to make a diagnosis of placenta centralis in time. If the cervix is open enough to admit two fingers, we must make version or Cesarean section. We are not able to decide whether we have to deal with placenta previa centralis or partialis, in which case the hemorrhage stops immediately when the head comes down. I do not compare the statistics of Cesarean section and placenta previa, because that can not be done. We ought to have statistics of both. Cesarean section in selected cases gives us some very good statistics.

DR. DONOGHUE, in closing—Any general practitioner who is competent to pack a vagina properly is also competent to do a Cesarean section, because his asepsis must be complete in either case. The second speaker spoke of no hemorrhage after rupture of membranes in partial previas. I expressly said that in that class of cases Cesarean section was not indicated, and it should never be used. It is a self-evident fact that rupture of the membranes allows the head to come down and forceps can be used. My advocacy of Cesarean section is based on a belief that the child has an undeniable right to life, which should be preserved to it, if possible. To go over the other points which have been mentioned in the discussion would simply be repeating the arguments of the paper just read.

TREATMENT OF TUBERCULAR PERITONITIS.

(Continuation from page 604 of the discussion on the paper of Dr. Porter.)

The postmortem examination was made by Dr. Fütterer, one-half hour after death. General abdominal tuberculosis of the ascitic variety and slightly enlarged mesentery glands and firm adhesions matting together the whole mass of intestines, was found. No foci were found in the lungs or pleura. There was no old tubercular disease of the tubes. The intestinal mucous membrane was not examined.

Cultures from the peritoneal cavity were sterile and there was no pus infection of the peritoneum.

The points of interest in this case are: 1. The insidious onset of the disease. 2. The persistence of normal temperature. 3. Extreme pigmentation of the skin without Addison's disease. 4. The presence of a tumor in the median line of the abdomen extending from above the umbilicus to the pubis; and the tumor being formed by the greater omentum becoming rolled on itself and filled with fluid. 5. The termination of the case, death following thirty-six hours after the operation with symptoms of hemorrhagic diathesis. This was probably due to a toxemia of some sort, the toxic substances probably being liberated as a result of the changes which occurred consequent on operation.

CASE 2.—B. B. This patient was a young woman who was operated on for what was thought to be suppurative peritonitis following a rupture of the appendix. Her illness began suddenly with a chill and severe abdominal pain, which in the course of a few hours became localized in the region of the appendix. The temperature was high, ranging from 103 F. from the first. The abdomen soon became greatly distended, with marked rigidity of the abdominal muscles.

Operation.—The abdomen was opened through an incision along the outer border of the right rectus muscle, on the third day after the onset of the disease. The peritoneal cavity contained a large quantity of turbid fluid, the walls of the appendix and cecum were greatly thickened, but no rupture occurred. The entire peritoneum was thickly studded with tubercles and dense adhesions binding together the intestinal coils. The mesenteric glands were enlarged, some reaching the size of an English walnut. The appendix was removed, the cavity irrigated with salt solution and drained by tubular and gauze drainage.

The patient made a very slow recovery, leaving her bed only at the end of three months. As soon as she was able to travel, she was sent to Colorado. She remained there for two years and completely regained her health. At the

time she left her bed, she weighed about eighty-five pounds. When she returned to this city after an absence of two years, she had gained fifty-five pounds in weight.

As a result of the operation she had a ventral hernia for which she was operated on in the summer of 1899, three years after the first operation. In operating for the cure of hernia, the abdominal cavity was again opened. Careful inspection showed that scarcely a sign of the former extensive tubercular disease existed; all the tubercles had disappeared, the peritoneum was everywhere normal in appearance. Intestinal coils were nowhere adherent. The mesentery glands had mostly resumed the normal appearance. There were a few calcareous deposits to be seen here and there in the mesentery. These were surrounded by a wall of white fibrous tissue. Several of these deposits with surrounding fibrous tissue, were excised and submitted to a microscopic examination. No tubercle bacilli were found.

Since that time the patient has resided in this city and has been examined a number of times. There are no signs of tubercular disease in any part of the body. The interesting features of this case are: 1. The acute character of the disease, simulating closely acute appendicitis and the beginning of suppurative peritonitis at the time of operation. 2. Extensive abdominal tuberculosis, a part of which must have existed previous to the onset of the symptoms, although the patient was apparently in perfect health. 3. The complete recovery from the disease, as was evidenced by the return of health and the disappearance of all tubercular lesions of the peritoneum.

DR. ROBERT F. WEIR, New York—This is a subject that interested the American Surgical Association last week and a good deal of liveliness was elicited in the discussion. If I were to get the opinion of all of you I think it would be something like this: It would be admitted that we do not know how the disease invades the peritoneal cavity, but we are able to decide that its infection comes partly through the genitalia in both sexes; we also know that the appendix occasionally gives rise to it, but in many instances we can not trace it at all. It will be also admitted that when a case presents itself to us where there is fluid in the valley we can decide usually and wisely decide on a distinct plan of treatment. The accumulation may be all over the abdominal cavity, while in some cases it is encysted. Occasionally we can treat these cases by waiting and get good results, but why do this? Why keep this child in whom the disease is most common waiting when puncture or, preferably, a small incision, is pre-eminently a safe procedure? In reference to the influence of light and air, it is not believed that this plays an important part. I believe when a cure or improvement is effected the reason for it is to be found in the free invasion of the cavity, which means excision through the peritoneum, which brings about reflex circulatory change all over this largely extended membrane. When, however, one knows or finds by incision that no fluid is present or that matted intestines present themselves, it is best to hold one's hand. Even in such arrested operations I have occasionally found good results show themselves, though this is the exception.

DR. A. J. OCHSNER, Chicago—In looking over my own cases carefully and reviewing the literature on this subject I have come to certain conclusions which, it seems to me, are worthy of application in our clinical work. In the first place it seems that there is a certain class of patients suffering from tubercular peritonitis in whom medical treatment is better than surgical. This should consist in rest in bed, hygienic surroundings, aseptic food, and possibly certain remedies such as creosote and iodine. This form of treatment will probably enable 50 per cent. of these cases to improve. This relates to cases suffering from acute tuberculous peritonitis with ascites. There are two reasons why the surgical treatment is not indicated: 1. They do get well without surgical interference. 2. It has been shown that in acute tuberculosis of the peritoneum, with ascites, the surgical treatment was not followed by permanent cure when the operation was performed before the tubercles were fully developed, and for this reason this class should be excluded. There is, therefore, one par-