

devised very ingenious appliances for making extension and still allowing their patient motion of the hip-joint. After the patients have been treated for a length of time in bed, they are allowed to exercise in a wheel-chair.

Adams improved upon this method of long confinement in bed, by devising a bed in which extension could properly be applied and the limbs held in the normal position. In this, the patients could be carried into the open air daily. This is simply a form of portable bed.

Sayre and Taylor, in fact nearly all of the American orthopedic surgeons, have treated such cases with the long traction hip-splint: but I must say, judging from my own observations and those of others, that the results of this plan of treatment have been most unsatisfactory. The patient would wear the splint for years, and when removed there would either be a relapse, or one limb would be found to be considerably shorter than its fellow.

I believe that the treatment of congenital dislocation of the hip should be divided into three stages:

- (1) The period in bed.
- (2) The period with the long fixation splint with a lateral-pressure screw. (See Fig. 5.)
- (3) The period with the walking-splint.

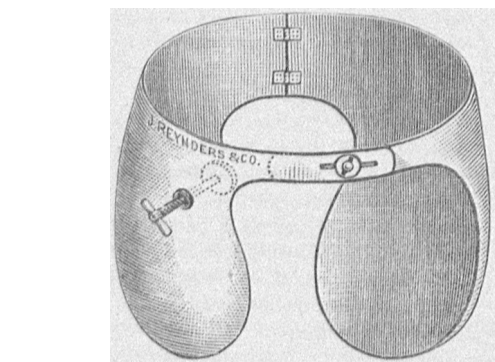


FIG. 5.

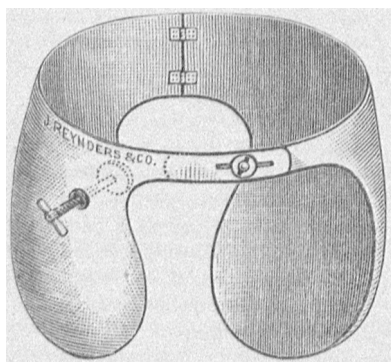


FIG. 6.

The length of the period of bed-treatment should continue until the limb is drawn down to the length of its fellow, if possible. During this treatment by extension, the patient is put into steel breeches (see Fig. 6), which has a lateral-pressure screw fitted to a pad, which makes pressure over the great trochanter: the object being to excite a certain amount of irritation, which will result in the growth of new tissue around the head of the bone.

After the limb has been drawn down to its normal length, which will take usually from two to six months, the patient is put on crutches, with a high shoe and fixation-splint, with lateral pressure, as seen in Figs. 5, 7.

The patient is never allowed, during this stage of treatment, to step upon the brace, but after a year, or



FIG. 7.

a year and a half, the upper part of the brace is cut off, the high shoe is lowered, and the patient allowed to walk upon the splint.

Small children I treat with the plaster-of-Paris portable bed.

## TWO CASES OF RUPTURED UTERUS TREATED EXPECTANTLY.<sup>1</sup>

BY EDWARD REYNOLDS, M.D.

Mrs. X., an out-patient of the Boston Lying-in Hospital, had been in labor about eighteen hours when I was called to her on July 24, 1886. The head was extended across the brim, the os was about the size of a dollar, the pains were almost unintermittent, and the uterus was in a state of tonic retraction. The condition had not been considered important, and I was merely sent for on account of lack of progress. I etherized the woman, and introduced the hand to flex the head, but with considerable anxiety, on account of the tonic condition of the uterus. At almost the first touch, before I had made more than a tentative effort, and before I had used as much force as is ordinarily requisite, there was an audible snap, the head receded from my touch, and the cord prolapsed. On passing the fingers through the os, I found that the head and one shoulder had escaped from the uterus into the abdominal cavity through an extensive longitudinal rent in the right lateral wall. The cord was pulsating, and the feet were easily accessible; in the interests of the child, I dilated the os manually, delivered by version, and removed the placenta and membranes manually from the uterine cavity. I then asked Dr. C. M.

<sup>1</sup> Read before the Surgical Section of the Suffolk District Medical Society, December 2, 1891.

Green to see the case with me; in the meantime administering stimulants subcutaneously on account of the severe collapse which almost immediately followed the rupture.

On Dr. Green's arrival, we carefully examined the uterus, and found that the rent extended from the cervico-corporeal junction about half-way to the fundus, but that it had not been prolonged into the cervix during the delivery of the child. There was no hæmorrhage of moment; and although the woman was by that time beginning to react from the primary shock, we agreed that her weakness forbade us to think of removing her to a hospital, and that the surroundings, which were those of a filthy tenement house, rendered laparotomy so far inadvisable that it was better to entrust her to the chances of conservative treatment. Within the next few hours she rallied from the shock, and during the next few days underwent a somewhat severe peritonitis, which was treated by opiates. She became progressively more and more weak; and although on the sixth and seventh days after the accident the peritoneal inflammation appeared to be decreasing, she failed, and died, apparently of exhaustion, on the eighth day. There was undoubtedly some septic infection. The child did well. I think now, as we both thought then, that the case was one which under better circumstances should have been treated by laparotomy.

The second case which I have to report is one which I saw in consultation, and which for obvious reasons I am unwilling to substantiate by giving the residence of the patient, or the name of the gentleman with whom I saw it.

The patient was a primipara, and after a somewhat long labor without essential progress, the doctor did a manual dilatation and version, extracting a medium-sized child without especial difficulty. Failing to deliver the placenta by Crêde's method, he passed his hand into the vagina, and was horrified to find that his fingers passed readily through a large rent in the posterior cul-de-sac, and came into contact with the peritoneal surface of the posterior uterine wall.

On arrival, I made a vaginal examination, and assured myself that the posterior vaginal wall had been ruptured across Douglas's fossa at its junction with the cervix, almost from side to side. I recommended no active treatment, other than scrupulous asepsis, which had already been observed during the labor; stimulants to counteract the primary shock, which was not extreme; a liquid, supporting diet; and the free use of small but repeated doses of sulphate of magnesium. I saw the patient several times during her convalescence. She underwent a fairly severe general peritonitis, but was never in a condition which I considered dangerous, and made a prompt recovery. She came to my office about three months later, at my request, for a pelvic examination. She was at that time the picture of health, and complained of no pain or other symptoms. On bimanual examination, I could detect no abnormality of the pelvic organs, other than a readily recognized cicatrix in the posterior cul-de-sac of the vagina.

Though this was properly a case of rupture of the utero-vaginal attachments and not of the uterus, the conditions involved are so closely similar that the distinction seems to be technical rather than essential.

In addition to these two cases I have had the opportunity of seeing two others, both of which recovered without treatment. Of these I will not speak in detail

as I hope that Dr. Green, in whose care they were, will report them himself to-night. My own experience with this accident thus consists of four cases, all treated without laparotomy, of which three recovered, while in the fourth, the only fatal case, circumstances prevented the method of treatment which was really indicated, that is, laparotomy.

I have made no attempt to review the literature of the subject, but before entering upon a general discussion of the question, I wish to quote from the first number of the *New York Journal of Gynecology and Obstetrics*, two very remarkable cases which have a distinct bearing upon the question.

In the course of a discussion upon intra-abdominal hæmorrhages in the New York Obstetrical Society, Dr. J. R. Goffe said that "an interesting case had come under his observation last summer, at Randall Island Hospital, in a woman who had been confined four months before, the labor having been a difficult and unaided one. While she was etherized for perineorrhaphy, he carefully examined the pelvic organs, and found that the sound passed directly through the uterus, and could be felt directly beneath the abdominal walls. The uterus was retroverted. Upon dilating the cervix and passing the finger into the uterus, the opening was found to be an extensive rent obliquely across the face of the uterus, reaching from the left horn to the internal os. There was no history to account for it, but he supposed it must have occurred during labor." This was the second case in which the speaker had found an opening through the uterus. The first occurred in a woman who presented herself at the clinic of the Woman's Hospital, and was seen at the same time by Dr. Cleveland. In that case, they could pass the uterine sound without any force directly through the uterus up to the umbilicus. The opening was not as large as in the one that he had seen the past summer.

When to these cases of my own are added the numerous instances of recovery without operation which I have chanced to see in the course of general reading during the last six years, I can but disagree heartily and entirely with the statement which is so often made, that laparotomy and suture of the rent is indicated in every lacerated wound of the uterus.

I am glad to have an opportunity of speaking upon this subject, because it is one in which I have been led to take an active interest by the experiences to which I have referred, and also because the opinions to which that experience has led me are in considerable contrast to those which we have just heard; and, as I believe that such discussions as this to-night are most profitable if each speaker outlines briefly the views to which his experience has led him, in order to afford an opportunity for the development of both sides of the question, I think it may be permissible for me to occupy a few moments more with a brief statement of the principles by which I should now expect to be guided if any case of this nature should present itself to me.

This accident exposes its victim to three dangers, and to three only; namely, to the exhaustion of primary shock, and to the dangers of hæmorrhage and peritonitis.

Primary shock, though rarely fatal, is usually well marked; and is sometimes so severe that it might well be sufficient to cause death in a feeble woman, or in one whose heart was already organically unsound. It

is always an element of importance in estimating the method of treatment which should be employed.

Hæmorrhage, though often fatal in untreated cases, must, I think, be much less frequent than has been supposed, at least, in its severer forms. So far as I am aware, its appearance or non-appearance cannot be predicted from the situation or extent of the rent. While there can be no doubt that in the face of persistent progressive hæmorrhage, laparotomy and suture of the rent offers the only possible chance of life to the patient, the diagnosis of the presence or absence of hæmorrhage is unfortunately by no means easy, and I should certainly agree that in the presence of any question upon this point the patient should be given the benefit of the doubt and subjected to laparotomy. In making this diagnosis our chief reliance, apart from physical examination, must be placed upon the duration of the primary shock. Under the subcutaneous use of stimulants, and the application of artificial heat, the patient ordinarily recovers promptly from shock unaccompanied by hæmorrhage. In consideration of the fact that there have probably been but few cases in which laparotomy was performed within an hour after the occurrence of the accident, I should be inclined, in the absence of distinct evidences of hæmorrhage, to wait at least an hour after reaction, before assuming its presence.

In many cases, however, it is possible to obtain important information by passing the fingers through the rent, in order to ascertain the presence or absence of considerable clots in the peritoneal cavity; and if this is done with proper gentleness and with due care to minimize the amount of manipulation, I can hardly think that it would add to the shock in degree sufficient to contraindicate the manœuvre.

In the absence of hæmorrhage, the one danger to which the patient is subjected is that of death from peritonitis; and the question in such cases resolves itself into the inquiry, what is the best treatment for peritonitis of either mechanical or septic origin in the presence of a lacerated wound of the uterus? Two elements in the situation must be considered in answering this question; and I think that it is best to consider each separately.

When the circumstances and previous conduct of the case are such that but a small quantity of, presumably aseptic, material can have entered the cavity of the uterus, I can see no advantage in an immediate laparotomy; but should be content with supportive treatment and the administration of Epsom salts, in the manner recommended by Mr. Tait, when the first abdominal tenderness appears; but in the case of a patient who is in good condition and not markedly collapsed, I should be inclined to begin its cautious administration at once, in anticipation of the peritonitis which is almost certain to follow, in some slight degree, at least.

My view of the proper treatment of these cases is founded mainly upon my experience in the treatment of septic peritonitis, in the out-patient clinic of the Boston Lying-in Hospital. Although in that clinic the death-rate from sepsis has of late years been reduced to a scarcely appreciable fraction of one per cent., the conditions under which the work is done have as yet prevented us from wholly excluding the disease in its minor and medium degrees of severity; but, although we are confronted several times each year with septic peritonitis of more or less severe

grade, we have, since the adoption of the open treatment as a routine measure, nearly four years ago, lost but one patient from this cause; and in that one, the onset of the disease was so extremely severe, that within forty-eight hours after the first symptoms she had developed metastatic abscesses, and died of pyæmia on the succeeding day.

In the light of this experience, I cannot believe that the degree of peritonitis which is likely to be caused by the retention within the abdominal cavity of a small amount of aseptic blood, or even of aseptic lochia, is likely to afford a sufficient risk to compensate for the added dangers of laparotomy.

When the circumstances of the case are such that a large quantity of clean foreign material, or an even small quantity of presumably septic fluid, has obtained entrance to the abdominal cavity, I think that the choice of treatment must depend upon the extent and situation of the rent. It seems to me that the only advantage to be gained from laparotomy, so far as the immediate preservation of life is concerned, is gained by the opportunity which it affords for cleansing the peritoneum by the injection of large quantities of warm water; and I contend that when the rent is large and accessible, and so situated as to afford fair drainage, it is better adapted for this purpose than any wound in the abdominal wall can possibly be. I should then in such cases content myself with flushing out the cavity through the wound, taking care to provide an adequate return for the injected fluid; and should resort to the insertion of a drainage-tube or a Miculetz gauze drain, in any case in which this seems to be indicated by the other circumstances of the case. When in the presence of probable septic infection, or of a large amount of foreign material in the peritoneal cavity, the wound is small or in an inaccessible situation, I should unhesitatingly resort to laparotomy, and should then seize the opportunity for the incidental advantage in after life which I believe to be afforded by accurate suture of the uterine wound.

Cases of incomplete closure of the wound, such as those reported by Dr. Goffe, are probably extremely rare, and in such cases, I myself believe that it would be as well for the patient to undergo a subsequent laparotomy for the closure of the rent, rather than to submit to the operation in the presence of shock, and in the face of the other disadvantageous circumstances which usually accompany an accidental rupture of the uterus.

In conclusion, I would then advocate laparotomy in the presence of persistent hæmorrhage, and in cases where the rent is small or inaccessible, and the quantity of foreign material introduced into the peritoneal cavity excessive, or of a septic character; if the irritation of the peritoneum has not been excessive, I would content myself by flushing out the abdomen, if possible; I should be satisfied with supportive treatment and the use of saline cathartics in all other cases. The use of these latter remedies I should of course advocate in all cases, whether operated upon or not.

It will be seen that the case which Dr. Haven has reported falls within the class for which I should recommend laparotomy, and I congratulate him heartily upon his wisdom and success in its management.

DR. WILHELM KRAUSE, who has been Extraordinary Professor of Anatomy in the University of Göttingen for thirty years, has resigned his chair.