

The Treatment of Acute Puerperal Inversion of the Uterus.*

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DURING the past two and a half years I have been called upon to treat three cases of acute complete inversion of the uterus. In this communication I wish to consider the treatment only of this rare and frequently fatal complication of labour. In my opinion the treatment advised by almost all text-book writers should be reconsidered. They urge immediate replacement of the inverted uterus in all cases. I wish to maintain that the mere displacement should be ignored, until the shock, which is so frequently present, has been satisfactorily treated.

All authors point out that shock is the most important symptom. It is certainly present in the majority of cases; in some it is very profound, and in not a few it has caused death within an hour or two of the accident. On the other hand, in a considerable number of cases, it is stated that there was no shock at all.

Pain and hæmorrhage are the other symptoms; the latter varies in amount very considerably, it is only rarely profuse.

The shock is produced, I believe, during the actual process of inversion, for it is well marked immediately after the accident, but, unless severe enough to have caused death, it gradually disappears, even though the uterus is left in its inverted state. A large number of chronic cases, which had an acute origin, have been recorded. It is therefore incorrect to state, as one well-known text-book states, that "great shock," the chief symptom of acute inversion, "remains as long as the uterus is inverted."¹

Now the process of re-inversion also causes shock even when the patient is anæsthetized. This I have actually observed. The shock so produced may be sufficient to kill the already collapsed patient; indeed there can be no doubt that this has frequently happened. A study of a long list of recorded cases would appear to prove the point. With the help of my friend, Dr. King, I have collected, chiefly from English literature, 184 cases of acute puerperal inversion; of these, 43 died, *i.e.*, 23·4 per cent. The mortality given by various authors varies from 14 to 50 per cent.

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Of 79 cases, in which the uterus was *immediately* replaced in the presence of marked shock, 24 (or over 30 per cent.) died. In 23 cases, in which it is definitely stated that there was *no shock*, immediate replacement was followed by recovery in each instance. In only one case is it stated that replacement was deliberately postponed until the extreme shock had passed off; this patient recovered.

In 11 cases there is no note as to the presence or absence of shock (probably, therefore, it was not present in any marked degree); immediate replacement was successful in each of these cases.

In 17 cases death occurred with the uterus unreduced; in many of these the patient had died from shock or hæmorrhage before the arrival of the doctor who recorded the case.

In 47 cases the uterus was not reduced at once, but was allowed to pass into a state of chronic inversion which was treated later in various ways, with recovery of the patient. In two other cases death was due to septic infection. In two cases the body of the uterus was twisted off by the attendant, and yet the patients recovered.

Of the 43 deaths, 41 took place within a few hours. The figures also show that *immediate* replacement of the uterus is followed by fatal results in 21 per cent. of cases. On the other hand, in the cases which were allowed to become chronic only two out of 47 died; less than 5 per cent.

I would like to advocate an intermediate course. The shock should be energetically treated by saline infusions and injections of pituitary extract and morphia. Then, in a few hours' time, when the patient has rallied, she should be anæsthetized and the uterus replaced. At the same time it is wise to repeat the saline infusion, and any other stimulating measures which may be considered necessary.

It seems to me that the following advice, given by an eminent English obstetrician,² is, to say the least, dangerous. After describing the collapsed condition of the patient, and stating that two-thirds of the patients die within twenty-four hours, he says: "The treatment is to push back the inversion. However exhausted the patient may be, and however unfit she may seem to undergo an attempt at replacement, you must remember that this is the only thing that will benefit her, and that the longer you wait the more difficult the reposition will be, and the less fit will the patient be to endure it. Therefore do not waste time in trying to revive the patient's strength, but replace the uterus *at once*." "An anæsthetic will make reposition easier, but rather than delay replace the uterus without anæsthesia."

I think there can be no doubt that the earlier reduction is attempted the more easily it is effected, but a delay of a few hours does not appear to increase the difficulty materially, whereas time is required in which to revive the collapsed patient.

Of course, in those cases in which there is no sign of shock, the uterus can be immediately replaced, but even then the patient should be anæsthetized, and a precautionary saline infusion given.

In my three cases the line of treatment I have indicated was used successfully. They were all young primiparæ, and had been delivered by medical men with large midwifery experience. In one case the inversion followed manual removal of the placenta; in the second it was due to manual expression; the third was a case of precipitate labour followed by spontaneous inversion of the uterus with the adherent placenta.

In the first case there was free hæmorrhage for a few minutes only after the placenta had been removed manually; the patient complained of great pain, and became very collapsed. The doctor, not recognizing the condition, made no attempt to replace the uterus. I did not see her until about four hours later. She was then very white and cold, with a small, feeble pulse of 130. I gave her a saline infusion, with a quarter of a grain of morphia, wrapped her in hot blankets, and after she had rallied sent her into Hospital. Two hours later she was anæsthetized, and an intravenous infusion of saline started. The inverted uterus was pulled outside the vagina, thoroughly washed and then reinverted without any difficulty. The ruptured perineum was repaired. Her general condition was greatly improved afterwards, but a few hours later she again became collapsed. She soon rallied, however, after a hypodermic injection of strychnine and digitalin, and a subcutaneous saline. She made a good recovery.

In the second case a slow second stage was terminated by forceps. Considerable force was used to express the placenta, with the result that the uterus was inverted as the placenta came away. There was only slight hæmorrhage. I saw the patient an hour later. She was very pale and collapsed, with a feeble though regular pulse of over 130. There was no bleeding. No attempt was made to replace the uterus, which lay in the vagina. I gave her a hypodermic injection of morphia (gr. $\frac{1}{2}$) with atropine. She soon became drowsy, and the pulse improved markedly. She was sent into Hospital, where, about five hours after the accident, she was anæsthetized and the uterus was replaced with somewhat more difficulty than had been experienced in the first case. The manipulation took ten minutes and produced a good deal of shock, although an intravenous infusion of saline with strychnine was being given. Deep tears in the vagina and perineum were repaired. The patient's condition was greatly improved before she was sent back to bed. Rectal saline with hypodermics of strychnine and digitalin were given at intervals, and there was no recurrent shock.

The third case is the most interesting to me, as it best illustrates my argument. Soon after a "precipitate" expulsion of the child the

patient, unassisted by the doctor, expressed the inverted uterus with the adherent placenta; the whole mass lay outside the vagina. The doctor found the patient very collapsed, "just," as he said, "as if she had a severe hæmorrhage, and yet there was only a little bleeding from the torn perineum." He sent for his partner, who immediately removed the placenta and attempted to replace the uterus. It was easily pushed back into the vagina, but further efforts caused the patient, who was not anæsthetized, great distress. After a few minutes the doctor desisted, as the patient appeared to be dying; she was pulseless at the wrist. A hypodermic injection of pituitary extract was then given. I arrived forty minutes after the inversion had taken place, and found the patient very collapsed, with a feeble pulse of over 150. Her condition was much more serious than that of the other two cases. Two pints of saline were quickly infused into the axilla and a quarter of a grain of morphia added. At the end of forty minutes the patient's condition was greatly improved, she was much warmer, had a fair pulse of 104, and had ceased to complain. Later she was taken into Hospital, but even then her condition did not seem to warrant an operation, so saline infusion and other forms of stimulation were renewed. By the next morning she was considerably better, and some twenty hours after the inversion had occurred she was anæsthetized, infused with saline and pituitary extract and the uterus replaced. This required a good deal of pressure for 12 or 15 minutes. Two catgut sutures were put in the torn cervix and the ruptured perineum was repaired. There was some septic endometritis during recovery, but her condition never gave cause for anxiety. In this case it is likely that the attempt to replace the uterus while she was suffering from shock nearly cost the patient her life.

REFERENCES.

1. Tweedy and Wrench. "Practical Obstetrics."
2. Herman. "Difficult Labour."