often done by the general practitioner. Still, it has been done, and we may hope that the cases in which it can be thus detected may become more numerous, for if we can ascertain the presence of placenta praevia before the haemorrhage has begun we shall be in a better position to treat it successfully. In the treatment of placenta praevia the essential thing is that the treatment should be begun before the patient has become exhausted by excessive haemorrhage. If we can secure pressure upon the bleeding points before the patient has been exhausted we shall be able to get her delivered without haemorrhage of any alarming amount.

III. *Post-partum Haemorrhage*.—The prevention of *post-partum* haemorrhage depends upon two things: (1) Upon the avoiding of extraction when the uterus is not acting, and (2) upon the careful emptying of the uterus. There are some medical practitioners who often get cases of *post-partum* haemorrhage. Why is this? The men who often have cases of *post-partum* haemorrhage are those who apply the forceps and pull continually, whether the uterus is acting or not. I used to come across a stock answer in examination papers, based, I think, on the writings of the late Dr. Playfair. Students would say they would "follow down" the uterus with their hands during the second and third stages of labour. I know not how they could do that and tie the umbilical cord, but I am sure it is absolutely unnecessary, for the uterus will take care of itself. There is no necessity for putting the hand on the abdomen during the birth of the child or during the expulsion of the placenta. The uterus will do its own work if it is allowed to.

The great thing to be avoided when using the forceps is pulling with them while the uterus is inactive. Let the uterus expel the child, and let the efforts with the forceps be confined to helping the uterus; never attempt to replace the action of the uterus. The object of putting the hands on the abdomen after the child is born is not to follow down the uterus. If the accoucheur has been careful only to extract the child while the uterus was contracting, the uterus will follow down the child and contract and retract. The object of putting the hand on the abdomen is partly to stimulate the uterus by friction and so accelerate the third stage of labour, but chiefly to ascertain that the third stage of labour is going on properly. The other great cause of *post-partum* haemorrhage is the imperfect emptying of the uterus. If the uterus is left with a bit of placenta or chorion inside it, it will not contract properly. To prevent that, carefully examine the placenta and the membranes to see that the chorion has everywhere come away with the amnion, and that a piece of the placenta has not been broken off. Put the placenta, uterine surface upward, into a basin of water, and then if there is a bit left behind you can perceive it better. Look at the fetal aspect of the placenta, and see if there are vessels running to the edge and there stopping short. If you see this, suspect that a bit of placenta is retained. A little portion separate from the main mass of placenta may be retained, and you may perceive nothing missing from the placenta until you float it in water. If some of the placenta has been left behind it is probable that part of the chorion also has been left, but if the membranes have been much torn it may be difficult to recognize that.

SUMMARY.

Those are the chief accidents which render labour a dangerous process. Septic infection can be prevented by the systematic and thorough following out of antiseptic principles in every case. Mechanical disproportion can be prevented by the examination of the patient at the seventh month, and by bringing about premature labour if the child is large, or if its size relatively to the pelvis is large. We cannot say at present that inducing labour will prevent haemorrhage, but examination during pregnancy seems to be the only thing which may in the future enable us to prevent this haemorrhage. *Post-partum* haemorrhage is to be prevented by taking care that the child or the placenta is not pulled from the uterus when it is not acting, and that nothing is left behind after the third stage of labour. If patients were regularly examined at the seventh month of their pregnancy much might be done in reducing the mortality of childbirth.

REFERENCE.

¹ *Lancet*, February 3rd, 1906.

The Ingleby Lectures

ON

THE MANAGEMENT OF A CASE OF LABOUR.

DELIVERED AT THE UNIVERSITY OF BIRMINGHAM.

By C. E. PURSLOW, M.D., M.R.C.P.,

HONORARY OBSTETRIC OFFICER, QUEEN'S HOSPITAL; INGLEBY LECTURER FOR THE YEAR.

[ABBREVIATED.]

AFTER thanking the Council of the University for the honour conferred upon him, the lecturer gave an account of the life and work of Dr. Ingleby; the latter was Professor of Midwifery at the Queen's College, Birmingham, and the author of a treatise on uterine haemorrhage, which had much repute in its day. The Ingleby Lectures and Scholarship were founded in his memory, and, in the words of the trust deed, "for promoting the advancement of obstetric medicine and surgery, including the diseases of women and children."

EDUCATION OF MEDICAL STUDENTS IN MIDWIFERY.

Dr. Ingleby was a strenuous advocate for the better recognition of midwifery by the authorities in the medical world, and by the examining boards, and for more thorough teaching of the subject, and after quoting Dr. Ingleby's views on this subject, the lecturer proceeded as follows:

Matters have improved as regards the education of the medical student in midwifery since Dr. Ingleby's day, but are still very far from satisfactory; attention was drawn particularly to this by Dr. Dakin in his presidential address at the Obstetrical Society of London last year. Dr. Dakin compared the careful instruction in medicine and surgery which the student is compelled to undergo, by the examining boards, at the hands of members of the hospital staffs, with the casual way in which he is allowed to get his practical knowledge of midwifery; all that is wanted from him in this respect being a certificate "of attendance on twenty labours," and this may be signed by "one or more legally qualified practitioners." No rules are laid down as to what should constitute "attendance."

The teaching of midwifery will never be placed upon a satisfactory basis until each medical school has its own lying-in hospital or lying-in wards attached to its general hospital, attendance in which, under the recognized teachers of the subject, must be compulsory; and the certificates of those teachers alone should be accepted by the examining Boards; in this connexion I welcome the proposed re-establishment of a lying-in hospital in this city, and trust that it may be made available for the instruction of medical students.

THE MANAGEMENT OF A CASE OF LABOUR.

Early Management of the Mother.

The anxieties and responsibilities of the medical attendant begin as soon as the patient engages him to attend her in her expected confinement; and the first question which arises is, Should he insist on making an abdominal and vaginal examination of every patient?

A few obstetricians refuse to attend cases in which they are not allowed to make such an examination. My own view is that, though such an examination may be theoretically advisable, it is by no means always practically expedient, and it should only be insisted on when in a primipara there is a history of rickets in childhood, or the presence of an actual deformity, as distorted spine, or bent legs, or dwarfed stature, suggesting rickety pelvis, or kyphosis suggesting kyphotic pelvis, or disease of the hip-joint, loss of a leg or lateral curvature suggesting some form of oblique pelvis.

In a multipara the history of previous labours may always be taken as a safe guide, and examination only insisted on when the occurrence of previous difficulties in delivery suggests a contracted pelvis. The patient should be kept under careful observation during her pregnancy; the diet should be regulated, and the urine systematically and carefully examined, particular attention should be paid to the presence of albumen in the urine, and, if this is found in a catheterized specimen, the patient should be

put under appropriate dietetic and hygienic treatment without delay.

The Doctor and Nurse.

The next question is the engagement of a nurse, and in this matter the medical attendant should certainly be consulted. Harmony between nurse and doctor is most essential, and from the point of view of puerperal infection the nurse is quite as important as the doctor. It is extremely annoying and unjust to an obstetrician that after taking most careful antiseptic precautions he should sometimes have his case infected by a careless and septic nurse.

If a nurse has passed through a course of instruction at a lying-in hospital she will, at all events, have been rendered fully aware of the importance of cleanliness, and as a rule, may be trusted to be safe. If the medical attendant has any doubt he should carefully instruct the nurse before the time of labour on the antiseptic measures he wishes her to use.

The state of health of both doctor and nurse is important, and any purulent discharge in either is decidedly dangerous. Any suppurative about the hands, such as onychia, should be held to be an absolute contraindication to midwifery practice for the time being. Suppurating aural or nasal discharges are also dangerous, and, if not held effectually in check, should unfit any one for midwifery practice.

Dr. Mendes de Leon of Amsterdam, in a paper read before the British Gynaecological Society two years ago, drew attention to the important part played by the expired air of the surgeon and attendants in producing sepsis in abdominal surgery, and although so far as I am aware it has not been proposed to wear gauze veils for obstetric work as is now done in some hospitals for operating, still we should at least be careful that there is no focus of infection in the mouth, such as necrosing and suppurating stumps, and the mouth should be well washed out daily with antiseptic lotion.

It is advisable for an obstetrician, as for an operating surgeon, to avoid long hair, and if a beard is worn at all it should be short and well trimmed.

One may sum up by saying that the most scrupulous attention to personal cleanliness in both doctor and nurse is absolutely essential to obtain successful results in midwifery practice.

The Lying-in Room.

The choice and preparation of a room is the next question, though frequently the doctor is not consulted in this matter.

The best ventilated and quietest room in the house should be chosen, and it should not be near the water-closet. Fixed lavatory appliances, connected with the drains, are, in my opinion, always objectionable in bedrooms, and certainly no room containing them should be chosen for a confinement. It is well to have an open fireplace in the room, and I must confess to a strong preference for open coal fires over any other form of heating for a bedroom.

A single bed, with firm mattress, should, if possible, be used. The mattress should be protected by a mackintosh covered by a clean folded sheet, or the cotton-wool sheet supplied in obstetric outfits for the purpose, and it is a distinct advantage to have the patient in such a position that she can place her feet against the foot of the bed and pull upon a sheet attached thereto, as this aids the expulsive efforts.

The Patient During Labour.

The patient should, when possible, have a bath at the onset of labour, and then put on clean clothing, vest, and nightdress, the latter being tucked up round the waist, a clean skirt, and clean stockings.

After labour has commenced the patient should be strictly enjoined not to make use of the water-closet, but to use clean utensils in the bedroom, and these should be at once removed by the nurse.

If the patient has not been able to have a bath the nurse can, at all events, wash the vulva with soap and water. To any one who considers the matter for a moment it must be obvious that the vulva in many women harbours innumerable germs, and in this connexion we should welcome, as obstetricians, the more rational form of dress which women have largely assumed of late years. It is highly desirable that all women should wear some form of bifurcated and closed garment

for the lower extremities, so that contamination of the vulva by the dust and germs of the streets, which may be swept up by the skirts, should be prevented.

Abdominal Examination.

Much has been written of late years about abdominal palpation in labour, and no one can deny its great value. Some have gone so far as to claim that labour may be conducted throughout without vaginal examination; and though this is undoubtedly true as regards lying-in hospitals, it cannot apply to every case in private practice, and for this reason: By abdominal palpation one can diagnose the position and presentation of the child, its adaptability to the pelvis, the presence or absence of liquor amnii, and the character and strength of the pains; but one cannot ascertain the state of the cervix, and it is the latter which is mainly our guide as to the time the labour may be expected to last and the wisdom or otherwise of leaving the patient. Therefore, while advising that vaginal examinations should be as few as possible—and in many cases one will suffice—I cannot endorse the advice of those who would forbid them altogether.

Preparation of the Hands of the Obstetrician.

I should like, in the first place, to lay particular emphasis on the importance of guarding against contamination of the hands as far as possible in our daily work. I feel sure that there is room for improvement in this respect, and that the "aseptic conscience" of each of us should be so developed as to prevent us at any time needlessly infecting our hands with septic matter, and to make us always on our guard against contamination.

For examining and operating upon septic cases of all kinds rubber gloves are strongly to be advised. I never examine cases of puerperal sepsis to which I may be called without first putting them on. I find that all the manipulations required can be quite well performed in them.

In connexion with this question of safeguarding the hands from septic contagion there are two points in everyday gynaecological practice to which I wish to draw attention.

The first is that the free use of grease in making gynaecological examinations is a great preventive of contamination of the skin of the examiner's hand.

The second is that, after the surgeon has made a vaginal examination, the nurse almost invariably hands him a piece of cotton-wool with which he is expected to wipe his finger. It is, in my opinion, a mistake for him to make use of this; it is far better that he should at once plunge his hands into hot water and wash them in the usual way.

There are many different ways of preparing and sterilizing the hands, but practically all agree in commencing with a thorough and prolonged scrubbing in soap and water, using a nailbrush; it is always well for the obstetrician to carry his own nailbrush. After rinsing off the soap the hands should be immersed in some antiseptic solution. Personally, after the preliminary scrubbing with soap and water, I soak my hands in a 1 in 2,000 solution of mercury perchloride, again using the nailbrush.

There is a tendency on the part of some practitioners to make too much of a fetish of the chemical antiseptic, and correspondingly to neglect the soap and water; the latter is, in my opinion, by far the more important agent.

The coat should be removed, the shirt cuffs turned up, and rings, if worn, removed before commencing to prepare the hands.

Vaginal Douches.

As regards the question of an antiseptic vaginal douche before labour, personally I do not advise that one should be used, and I think that there are many strong objections to it, the most important being that by using the douche the natural lubricating secretion, which is thrown out so freely in the early stages of labour, is washed away.

It is well for the nurse in every case to give a rectal enema at the beginning of labour, and, when the bowels act, special care should be taken in cleaning afterwards to ensure that faecal matter does not contaminate the vulva.

Vaginal Examinations.

The question of a lubricant next engages our attention. A lubricant is not absolutely necessary, and can be

dispensed with, but, in my opinion, it is preferable to use one, as the introduction of the finger is thereby facilitated and rendered less painful; this applies particularly to primiparae.

Another strong argument in favour of using a lubricant is that the latter undoubtedly protects the skin of the examiner's finger, and renders inoculation of syphilitic or septic poison less probable. The late Mr. Lawson Tait strongly supported the use of grease from this point of view. He said in his book on *Diseases of Women*:

It must not be forgotten that this is one of the most important objects in the use of grease in vaginal examinations.

Whatever preparation is used, the lubricant should always be carried in collapsible tubes and not in pots or boxes; a little may be squeezed out on to the finger, and the remainder is not contaminated.

Rupture of the Membranes.

If the membranes have not ruptured at the time of the first examination, it is always advisable to make a second examination when this event occurs, as a change in the presentation may sometimes then take place, but more particularly because it is at this stage that the cord occasionally comes down; unless this condition is detected by vaginal examination, the child's life may be lost for want of the appropriate treatment.

The Second Stage.

During the course of the labour the vulva should be cleansed at frequent intervals, and, as the head descends and commences to press out faecal matter, this should be wiped away by pledgets of wool dipped in hot perchloride solution, taking care to wipe in a direction away from the vulva. If the fingers of the obstetrician or nurse become soiled with faeces, the hands should be at once thoroughly washed, and afterwards immersed in the perchloride solution.

As soon as the head reaches the vulvar orifice the parts should be kept clearly in view until the labour is completed.

I believe that much may be done in the way of prevention of rupture of the perineum by preventing the head from making too rapid an exit, and by pushing it forward against the pubic arch and assisting its extension.

The head may be pushed forward and extension favoured by placing the thumb or finger on the stretched-out tissues at the sides of and behind the anus and pressing forward. I do not favour the placing of a finger in the rectum, as, in addition to the disadvantage of fouling the finger, the rectal mucous membrane may be readily damaged by this proceeding. An additional means by which the perineum may be saved is by taking care that the thighs are extended at the moment of greatest stretching; this particularly applies to the right thigh, which is held up by the nurse at this stage, and, unless she is directed otherwise, she will flex it strongly on the abdomen.

My experience of ruptured perineum has been that many of the worst cases have been those in which the child was born without any assistance before the arrival of the accoucheur.

The incision of a tense perineum has never commended itself to me, and is not, I think, much practised in this country; the main objection to it appeared to me to be that one can never tell with certainty that a perineum is going to rupture, and if incisions are practised as a regular procedure a perineum will frequently be incised which, except for the zeal of the obstetrician, would have escaped damage; to what length incision is carried out in Germany may be judged from an article by Fleishman, who recommends

The use of the median episiotomy incision in place of the lateral incisions which are commonly advised, on the ground that it gives more room, has cleaner edges, and more equal surfaces, and is not so liable to extend deeply; he has considerably extended the indications for its use, and it is often his first procedure in forceps delivery in elderly primiparae. Not infrequently by the use of median perineotomy it has been possible to save the patient from forceps operation.¹

I think that I may say that the latter would be regarded by us as the lesser evil of the two.

UTERINE INERTIA.

Delay in the first stage with the membranes unruptured may be prolonged over several days without any harm

resulting, and I have known the uterus to remain absolutely inactive, with the os open to the size of a crown piece, during six or seven days; some of the most marked examples of this condition have been in the poor patients of the hospital and lying-in charity, and the inertia has been due, I believe, to muscular weakness from insufficient food during the latter part of pregnancy.

If the membranes have ruptured, delay even in the first stage may become serious, and the mother may show dangerous symptoms of exhaustion, and active treatment may be indicated.

The usual treatment, however, of inertia in the first stage is to give the patient nourishment and to endeavour to obtain sleep, administering sedatives if required.

As regards oxytocic drugs, I do not think that the value of quinine is sufficiently appreciated. Five grains, in powder, repeated two or three times will often have a marked effect.

The administration of sugar has been proposed as a remedy for exhaustion of the voluntary and involuntary muscles of labour. I have tried it with, I think, good results; it has at all events the merit of being harmless.

I think that the majority of those who attend midwifery cases will agree with me that a certain, not inconsiderable, percentage seem unable to terminate their labour without assistance, and require forceps to complete the second stage, no matter how persevering the woman or how patient the accoucheur.

Posture in Labour.

I believe that this failure of the natural powers to complete delivery is to be ascribed in part to what may be called the unnatural position assumed by civilized woman at the latter part of the second stage of labour. Dr. Robert W. Felkin, in a paper read before the Edinburgh Obstetrical Society in 1884, entitled *Notes on Labour in Central Africa*, gives an account of the customs of numerous tribes, with illustrations of the positions adopted during labour, and the latter show that some form of semi-erect or squatting posture is universal.

The question of posture in labour is gone into very thoroughly in a book entitled *Labour Among Primitive Peoples*, by Dr. Engelmann.

After describing the attitudes assumed by uncivilized peoples in all parts of the world, he sums up as follows:

The care with which the parturient women of uncivilized people avoid the dorsal decubitus, the modern obstetric position, at the termination of labour, is sufficient evidence that it is a most undesirable position for ordinary cases of confinement.

The reasons given for its undesirability being that no assistance from gravity is derived in that position, and that the abdominal muscles cannot act to advantage. It is clear that the strict dorsal position as taught on the Continent of Europe and in the United States is the one referred to, as Dr. Engelmann says:

The English method, on the side, with the body bent forward and the thighs drawn up, is much more advantageous, in so far as the abdominal muscles act better.

He says, however, that the proper position for the termination of the second stage is

the semi-recumbent position in bed, the body at an angle of 45°, the hips resting on a hard mattress, thighs well flexed.

And states:

This is the easiest, most comfortable, and appears to afford the greatest relief and the greatest freedom from pain, coupled with the greatest effect of the uterine contractions, relaxation of all the parts, and free play of the abdominal muscles.

He points out, moreover, that in this position the perineum has a certain amount of support from the mattress on which the patient is placed.

Whether we agree with the above or not, I think that all obstetricians may, with advantage, follow the advice of Dr. Engelmann that in labour the patient should be given greater liberty, and should be permitted to follow her instinct, in regard to her movements, more freely than is now customary.

The attitude assumed by women of the poorer classes in this district approaches somewhat to that described by Dr. Engelmann as the most efficient. The bed is rolled up from the mattress, and the patient lies on her left side, with her shoulders raised up to a considerable height by the rolled-up bed; this position is inconvenient for the

accoucheur, but one cannot doubt that it is advantageous for expulsion.

The worst attitude of all is the usual left lateral on the modern spring bed; the latter invariably sinks down towards the middle, and, if the hips are brought to the edge of the bed, as is usual, they are at a distinctly higher level than the remainder of the body, and the expulsive powers are consequently working against gravity instead of being favoured by it.

THE USE OF FORCEPS.

I am firmly convinced that the timely application of the forceps when the head is on or near the perineum and does not advance, in spite of strong pains, is beneficial.

If forceps are used and chloroform is given, very little of the latter is required, less than 1 drachm being amply sufficient in many cases. It is most important not to give chloroform to such an extent as to render the regular pains not easily discernible, and it is essential that traction should only be made during a pain.

Opinions differ as to whether the forceps should be taken off when the head is distending the perineum. Personally I am in favour of keeping them on until labour is completed, as by their means the head can be kept well forward under the pubic arch, and the strain on the perineum considerably relieved; moreover, the speed of delivery can be exactly regulated, and I think that these advantages more than compensate for the small amount of extra room required by the blades of the forceps.

OCCIPITO-POSTERIOR POSITIONS.

A frequent cause of delay in the second stage is a persistent occipito-posterior position of the vertex, and I have found that some of these cases can be most successfully treated by rotating with the forceps, after other means of rectifying the position have been tried in vain.

To do this it is absolutely necessary that the diagnosis should be exact, and that a clear and correct idea of the direction in which the head ought to rotate should be formed; when this has been done the forceps may be applied, and as traction is made gentle rotation in the required direction should be made also; if this is successful it will be necessary to take off the forceps and reapply them before delivery is completed, unless short forceps are used.

RUPTURE OF PERINEUM BY SHOULDERS.

It is not uncommon for the perineum to be ruptured by the passage of the shoulders after it has stood without damage the passage of the head. This may frequently be avoided by preventing the shoulders from emerging together, and thus distending the perineum to the full extent of the bi-acromial diameter; and in order to do this the anterior shoulder should be extracted first.

THIRD STAGE.

We find that there is a general consensus of opinion that the management of this constitutes the most important part of the obstetrician's duty. Dr. Ingleby said:

If the skilful management of the placenta is justly deemed a great attainment in the practitioner, it cannot be doubted that it is of great importance to the patient, whose life indeed may be said to depend immediately upon it.

We may with interest and advantage consider the varied views which have been held in the past as to this part of the obstetrician's duty. [After reading extracts from several old books Dr. Purslow continued:]

All modern writers of textbooks ignore the reasoning of Denman, and advise some assistance during the third stage; the usual method recommended is, that the hand should be placed on the uterus during the latter part of the expulsion of the child, and, after that is completed, that the uterus should remain more or less continuously under observation by the hand, and that if it becomes flaccid gentle kneading should be used to induce contraction again: as soon as there is evidence that the placenta has left the uterus, as shown by the diminution of its circumference, the uterus is firmly grasped and pressed downward in the direction of the axis of the pelvic brim thus forcing the placenta out of the vagina. In the words of Galabin:

In this expression the contractile upper segment of the uterus acts simply as a piston, by means of which the pressure

of the external hand is transmitted to the placenta lying in the relaxed lower segment and vagina.

If there is no descent of the placenta at the end of about half an hour it is advised that the uterus be stimulated by pressure and kneading, and, as it becomes hard, that it be squeezed; and, if the placenta can be felt to leave it, that the pressure be continued downward in the direction of the pelvic axis, as above.

In contradistinction to the usual teaching of the present day, Dr. Horrocks² takes the extreme line in non-interference, and would not even advise following down the uterus during the expulsion of the child, or placing the hand on it after delivery, to ascertain if it is contracted; he says that if there is no visible haemorrhage and the pulse is good we may safely assume that all is going on well without examining the uterus.

The difficulty so often experienced in the third stage of labour in civilized women as compared with its ease and shortness in the uncivilized is undoubtedly partly attributable to the position assumed by the former. Among the uncivilized some form of external pressure by the woman herself, or her attendants, is almost universal, but, as pointed out by Engelman, the position assumed is invariably the standing or squatting, and thus gravity comes to the aid of the expulsive efforts. In the usual obstetric position the woman is unable in many cases to extrude the placenta from the vagina without artificial assistance; thus von Campe (quoted by Hirst) in 120 observations found that in twenty-four instances the placenta had not been expelled within twenty-four hours.

It is strange that there should be any difference of opinion as to the surface of the placenta which presents at the os uteri and vulva, but on looking up the matter I find that all writers are not agreed on this; the majority state that some point on the amniotic (fetal) surface presents, thus Champneys found, in a careful observation of 70 cases, that only two presented by the maternal surface. Hirst states that

The placenta is usually expelled like an inverted umbrella, the fetal surface coming first, with the membranes trailing after it; it occasionally, however, escapes edgewise.

Dakin says:

The placenta never, unless its lower edge was originally close to the internal os, presents by its edge, but by some spot on its fetal surface from $\frac{1}{4}$ in. to $\frac{3}{4}$ in. above its lower edge, in most cases about 2 in.

Playfair alone amongst the authors whom I have consulted describes the maternal surface as presenting; thus he says:

The uterine surface of the placenta is generally expelled first, the cord being within the membranes.

and he gives a diagram to represent this.

I have paid particular attention to the phenomena of the third stage of labour, and have watched it carefully in each case, and I have come to the conclusion that the placenta normally presents by the amniotic surface, as described by Hirst and Dakin, and that the description of Playfair is absolutely wrong. Moreover, I have formed the opinion that presentation of the maternal surface is almost always brought about by too early or too forcible application of expression to the fundus, and is invariably attended by tearing and retention of more or less of the membranes.

It is well known that attempts to press out the placenta too soon after the birth of the child are very liable to be followed by difficulty with the membranes, and the explanation I venture to give is this:

If pressure is made while the placenta is still partly attached to the uterus, the effect is to drive the blood, which is lying behind the placenta, into the most dependent part of the bag formed by the already detached and inverted portion of placenta and membranes, and if this pressure is forcible and continued, the blood is forced through the membranes at their junction with the placenta, and the maternal aspect of the edge of the placenta is thus allowed to present; when the membranes have once been torn in this way they may easily be completely detached, and I have no doubt that it has been within the experience of some of my audience, as it has been my own, to occasionally see the placenta expelled entirely bereft of its membranes, in cases where there has been much difficulty with the third stage.

This unsatisfactory result will very rarely be seen if ample time is given for the placenta to separate and no attempt is made to squeeze the uterus forcibly, gentle kneading to encourage uterine contractions being all that is required.

I believe violent squeezing of the uterus shortly after the child is born to be a most disastrous proceeding, and one of the reasons for the still extensive prevalence of puerperal fever. Credé himself in his later years considerably modified his method, and in his latest writings directed that, in the absence of any serious haemorrhage, about thirty minutes should elapse before the placenta was expelled.

The same forcing of blood through the membranes, tearing them away from the placenta, may occur as the placenta is being expelled from the vulva; and it is upon three cases in which I saw this happen that I have based the explanation above given. In these cases the amniotic surface of the placenta first appeared in the usual way; then, as pressure was being made from above, the edge of the placenta with the adjoining membranes appeared, and on further pressure the membranes could be seen to give way and the maternal surface appeared, several clots at the same time escaping from the interior of the torn bag of membranes. It is probable that in these cases the outer edge of the membranes had not been completely detached.

The same result might conceivably result from violent bearing-down efforts of the patient without assistance from the accoucheur; but in each case in which I observed it external pressure (Credé method) was applied.

When the placenta is in the vagina there is less likelihood of the accident I have described occurring, if, in addition to pressure on the fundus, gentle traction on the cord is also used to assist the exit of the placenta; less pressure is needed on the uterus, and the placenta and membranes come away intact in a more satisfactory way than when the Credé method alone is used. We may regard the amount of traction on the cord as compensating for the loss of the assistance of gravity which, as we have already seen, is obtained in the more natural position assumed by the uncivilized woman for this stage of labour.

It seems to me that in the reaction against the old, bad, and dangerous method of dragging out the placenta from the uterus by pulling on the cord, some writers have gone too far in laying down the rule that the cord should never be pulled upon, even when the placenta is lying outside the uterus.

Since writing the above I have read a most valuable address by Dr. G. F. Blacker³ on the Management of the Third Stage of Labour. He says that there are three ways in which the placenta may be expelled: First, the inverted fetal surface leading; secondly, folded upon itself; third, the maternal surface leading; and adds:

It is more especially when the placenta is expelled in the last-named way—which occurs, according to Varnier, in 9 per cent. of cases—that retention of membranes is liable to occur.

In the Queen's Hospital Maternity some 400 to 500 cases are attended annually, and during the sixteen and three-quarter years in which I have been in charge there has been no death from *post partum* haemorrhage. This good result I attribute partly to the fact that the students attending the cases are not hampered with other work, and consequently are not tempted to unduly hasten the delivery of the placenta.

Conclusion.

To sum up, my own views as to the mechanism and treatment of the third stage are:

That in all but a small percentage of cases the uterus is able to separate and expel the placenta from its cavity without assistance.

That the time required for this varies greatly. In some cases the placenta appears to be separated by the same pain which expels the body of the child, and in a very few minutes will be found in the vagina; in other cases half an hour or more is required. Delay and difficulty is more particularly experienced in cases in which the previous stages of the labour have been tedious, and especially when delivery has been effected by forceps under chloroform, after many hours of ineffectual pains.

That the vigorous squeezing of the uterus, so commonly practised a short time after the child is born, interferes

with the mechanism of detachment, and leads to tearing and separation of portions of membrane, or even in some cases of portions of placenta.

That, although squeezing is not advisable, it is well to place the hand at frequent intervals upon the uterus, as otherwise, in some cases, the uterus may distend with blood to a dangerous extent; if this distension is felt to be taking place, gentle kneading movements, to ensure contraction, may be used.

That a considerable proportion of women appear to be unable to expel the placenta from the vagina, and that this failure is partly due to the lack of the assistance of gravity when the woman is in the recumbent position.

That it is a mistake to rely solely on forcible pushing downward of the uterus in order to procure the expulsion of the placenta from the vagina, and that much better results are obtained when less pressure on the uterus is employed and the exit of the placenta is assisted by gentle traction on the cord.

AFTER-TREATMENT.

When the placenta and membranes have been examined and found to be complete the patient should be cleaned up. I think that it is at this stage that remissness is sometimes shown, and I am strongly of opinion that the toilet of the vulva should be performed by the medical attendant himself, and not left, as is so often done, to the nurse or, among the poor, to the ignorant and dirty neighbour who is officiating in that capacity. I am convinced that some cases of puerperal fever arise through this rule not being observed.

In addition to cleansing the vulva with an antiseptic lotion, it is well to trim the hair of the labia with scissors, if it is at all long, as its removal much facilitates the subsequent task of keeping the genitals clean. When the cleansing is completed, a clean napkin or antiseptic pad should be applied to the vulva.

As regards douching after labour, there is great divergence of opinion; my own practice is: If I have found it necessary to pass my hand into the uterus, as for removal of the placenta, I give an intrauterine douche myself, at the conclusion of the labour, of some antiseptic, as lysol, *not* perchloride, as the latter is readily absorbed from the inner surface of the uterus.

I have tried the various forms of apparatus used for this purpose, including the Higginson's syringe, the reservoir douche, and the Rotunda siphon douche, and have come to the conclusion that there is nothing at once so clean, safe, and satisfactory as the apparatus we have used for some years in the Queen's Hospital maternity; this consists of a glass funnel, about 2½ ft. of rubber tubing, and a glass vaginal or uterine tube. The solution is prepared in a jug and the funnel is given to the woman in attendance with directions to keep it full from the jug; by this means there is no risk of air getting in, as will happen with a Higginson's syringe; neither is there any risk of the apparatus being fouled by any backflow, as is the case with even the best Higginson's syringe.

The pad on the vulva must be changed at intervals, particularly after evacuation of the bladder or bowels, and a fresh one substituted. The same pad must on no account be replaced.

After evacuation of the bowels the parts must be cleansed with antiseptic lotion, great care being taken that the vulva is not contaminated with faecal matter.

As regards the repair of lacerations of the perineum, the needle to use for this purpose should be one with a strong curved stem, and a handle which will give a good grip. Cullingworth's perineum needle is one of the best, and is the one I always use. There is no better material for suture than silkworm gut; this can now be obtained prepared, and with its ends cut off, and the very stoutest salmon line gut should be chosen for this purpose; it is readily sterilized by boiling.

The most usual fault in repairing the perineum is that too small a needle is used, and the deeper structures, particularly the torn muscle, are not secured; the result is that the skin may heal, forming a bridge underneath which is a communication between rectum and vagina. I have dealt with several cases in which this condition had resulted, in the gynaecological ward of the Queen's Hospital.

After the patient has been placed on her back in bed, it is usual to apply a binder to the abdomen, though this

should not be done until at least half-an-hour after the birth of the child, and not then, unless the condition of the uterus and of the pulse is satisfactory.

Some modern authorities state that a binder is not necessary, and has no good effect in preserving the figure, but, even if that be granted, no one can deny that the binder has an immediate good effect in driving the blood from the large veins of the abdomen, and so preventing any tendency to cerebral anaemia, and this is particularly useful if the loss of blood has been at all great. I do not agree with the plan followed by some accoucheurs of putting a hard substance, as a book or pincushion, over the uterus before applying the binder.

There are some points in connexion with the management of the puerperium to which I desire to call attention.

First, with reference to retention of urine, which not infrequently follows a prolonged or a forceps delivery, before having recourse to the catheter, hot fomentations, preferably with antiseptic lotion, may be tried, and sometimes they are efficacious. If the catheter is required the question arises, Should it be passed by touch or by sight? I am strongly in favour of the latter plan, but, before giving my reasons, I should like, with your permission, to quote verbatim the directions given in Herman's *First Lines in Midwifery*, as this is a book extensively read by students and midwives:

To Pass a Catheter.—Place the patient on her back, with the knees drawn up. Cleanse the parts by gently wiping them with wool dipped in 1 in 2,000 sublimate solution. Take the catheter in the right hand, and hold it about 2 in. from the tip. (It is a good thing to put about 3 ft. of indiarubber tubing over the open end of the catheter; the urine is then conveyed out of the bed into a utensil on the floor.) Stand on the patient's right side, and pass the right hand holding the catheter under the patient's right thigh. Pass the left forefinger over the abdomen between the labia into the vagina. Then draw it upwards exactly in the middle line until the pulp of the forefinger feels the orifice of the urethra. The meatus urinarius feels very like one of the small linen-covered buttons with which underclothing is often fastened: a little ring, with a slight depression in its centre. When you feel this, draw the finger upwards till it is just above the meatus, and then with the right hand pass the point of the catheter below the tip of the left forefinger into the urethra. If you cannot succeed in thus quickly finding the meatus by the touch, it is better to look than to annoy the patient by prolonged attempts at passing the catheter by the touch alone.

The manœuvre above described is not easy to perform, and requires some practice; moreover, I venture to think that it is by no means the best way of passing the catheter, and that there are several objections to it.

In the first place, it increases the risk of cystitis, as it is impossible to be sure that the orifice of the urethra and its immediate neighbourhood have been wiped free from discharge unless they are clearly seen, and some of this may be carried into the bladder on the catheter.

Then, again, the manipulation about the external genitals introduces an added risk of septic infection, and, as shown in Dr. Knyvett Gordon's paper, septic infection during the lying-in period is much more common than is usually supposed.

Before passing the catheter a clear view should always be obtained of the urethral orifice; this can be done with the patient lying on her back by separating the labia with the fore and middle fingers of the left hand. The urethral orifice and its neighbourhood should then be cleansed with an antiseptic, and the catheter, which is held in the right hand, inserted. It is, in my opinion, better to use a small basin to catch the urine than to attach a tube, as the latter makes the catheter more difficult to manipulate, and a further disadvantage is that it is not so easy to see if the urine is escaping properly.

A glass or metal catheter should be used; the latter is perhaps safer for a nurse's use, as cases have occurred in which a glass catheter has been broken during the movement of a restless patient. The catheter is best rendered aseptic by boiling.

It is a good plan to allow the patient's body to be lifted up in-bed into the vertical position, after the third or fourth day, for a few minutes daily, to facilitate the escape of the lochia. Care should be taken that the patient does not lie too persistently on the back, and she should be encouraged to lie on either side at intervals. There can be little doubt that many cases of retroflexion arise from

the too-persistent assumption of the dorsal decubitus during the puerperium.

As regards length of puerperium, I am accustomed to regard a fortnight as the minimum period after a normal confinement; few women realize the importance of sufficient rest after parturition.

My experience in the out-patient room has led me to the conclusion that almost all the cases of bad procidentia, which are so numerous and so unsatisfactory in treatment, are due to women getting up too soon after confinement and, whilst the uterus is heavy and its supports lax, doing hard work.

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A CASE OF BURROWING TUBO-OVARIAN CYST, WITH REMARKS ON ITS PATHOGENESIS.

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It is now well known, thanks to Dr. Cullingworth, that a hydrosalpinx may burrow in the broad ligament and may simulate a true broad-ligament cyst, and evidently that was the first event in the present case.

History.

M. T., aged 31, was admitted into the Samaritan Hospital under my care in January, 1903. Though married for some years she has never been pregnant. Menstruation began at the age of 14 and continued regularly every month, the periods lasting three days. For the past two years, however, she has sometimes menstruated at fortnightly intervals, and during the six months preceding operation the courses had lasted longer, once as long as sixteen days, and the menstrual fluid has become paler in colour. The amount of blood lost had not increased. Five years ago she began to suffer from pain in the lower part of the abdomen. She describes it as a dull, mild, aching pain, worse on the left side, and eased by lying down. During menstruation she had shooting pains in the hypogastric region. She has never noticed any increase in the size of the abdomen. Of late she has suffered severely from a feeling of pressure on the rectum. The bowel felt sore inside so that she could not strain properly during defaecation, and the motions have been passed with great pain and difficulty. She had never had retention of urine, but during the past year micturition had been frequent, and she had had to get up four or five times in the night to pass water. There had been a feeling of great weakness, with inability to work and some loss of flesh.

Condition on Admission.

The patient was seen by my colleague, Mr. Corrie Keep, who diagnosed a broad ligament cyst, and advised operation. The abdomen was not markedly prominent. On palpation a median rounded tumour the shape of the pregnant uterus could be felt extending 2 in. above the umbilicus. Dullness extended from the pubes to the umbilicus. The tumour was slightly movable, and gave an indistinct thrill laterally. Vaginal examination showed that the tumour filled up the left fornix, and gave definite fluctuation when pressure was made on it with the abdominal hand. The right adnexa could not be felt from the vagina, but on palpation by the rectum a softish mass was felt in the right fornix far back. It was tender on palpation, and seemed to have the size and shape of a hen's egg. On passing the sound its point could be felt at the right edge of the abdominal tumour just above Poupart's ligament. The case was diagnosed as a left broad ligament cyst, with a smaller cyst on the right side.

Operation.

The abdomen was opened by a median 4 in. incision, and a left-sided cyst was exposed lying in the broad ligament, whose structures ran stretched out over the summit of the cyst. On tapping, about four pints of dark greenish-brown alkaline fluid escaped, of specific gravity 1015, containing only a very small amount of albumin. The ovarian vessels were now secured and cut through at the outer edge of the broad ligament, and a ligature was passed close to the left cornu, including the Fallopian tube and uterine artery. The cyst had burrowed right up to the side of the uterus, and there was difficulty in passing this ligature without transfixing the cyst wall. The tube and uterine artery were cut across on the outer side of the ligature. The round ligament was next ligatured and cut through. Incisions through the peritoneum were now made, joining the three points of section of the ovarian artery, the Fallopian tube, and the round ligament in one complete annular incision surrounding the Fallopian tube and the wound made by the trocar. The cyst was then enucleated from the broad ligament and the pelvic floor.