SOME PRACTICAL OBSERVATIONS ON THE MANAGEMENT
OF OBSTETRIC CASES, WITH NOTES FROM A RECORD
OF 500 CONSECUTIVE CASES OF LABOUR.

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INTRODUCTORY.

The choice of a subject for a suitable thesis for the Degree of Doctor of Medicine is an undertaking which the general Practitioner must approach with a sense of his incapability of doing that subject full justice, which varies with the confidence he has in his own ability, and the amount and nature of the material he has on hand, on which to express his views.

With the Specialist, or the fortunate Graduate who has time, opportunity and material for Laboratory Work, who can persue original research, and thus add some useful knowledge to that which is already common property, the case is entirely different. They, investigating special cases, or pursuing some idea conceived in Student days, can work these out with a reasonable chance of bringing useful information before the Profession, and credit to themselves.

The busy General Practitioner having none of these advantages of time, material or appliances, must content himself by writing on some subject which may interest him especially in his daily routine of practice.

For this reason I have chosen as a subject for my Essay one which has ever increasing and varying interest for
the Medical man, and having completed my notes on 500 consecutive cases of labour, I propose to set forth my experiences therewith, hoping to gain approval. These notes are the result of practical observation on cases that have come actually under my notice, and I shall not attempt to describe conditions or modes of treatment not actually experienced by myself.

I think it can be truly said of Midwifery, that no two cases of labour are exactly alike. The features which crop up as one observes a succession of cases, are in endless variety. The usual phenomena are presented in innumerable forms, while new phases are of frequent occurrence. Thus, to the observant eye, the Practice of Midwifery is one of exceeding interest.

To the newly qualified Student who, perhaps within a week or two of his receiving his Degree, maybe as an assistant or Locum Tenens, finds himself plunged into the difficulties and anxieties of a General Practice, with his too often meagre experience in practical work, I have no hesitation in saying that Midwifery presents more difficulties, and causes him more anxious moments, than any other branch of the Profession. For here there must be no faltering, no betrayal of nervousness, or inability to cope with any exigence that may arise or, (as he well knows), the confidence of
his patient and her friends is gone from him, not for the moment, but for good and all. Probably he has attended six cases of labour during his College days, most likely in company with a more advanced Student-friend to whom he left most of the practical work, and all the responsibility, hence, now that he stands alone on his own resources, small wonder it is that his courage fails him.

With the fortunate Graduate who obtains a three months' house Surgeonship at a Maternity Hospital, (as did the writer), or who is able to avail himself of a practical course in one of the large Hospitals in London, Dublin or elsewhere, the case is altogether different; and the man who has this experience goes with more confidence into general practice, than he who has had special practical training in any other branch.

For of what use to the unpractical man, (he may have the exact pelvic measurements etc., at his finger tips), is his exact theoretical knowledge, if he is unable, on examination, to detect the difference between the unruptured membranes and the foetal scalp; if he does not know how and when to apply the forceps for his patient's safety; or if he cannot expeditiously express a lingering and obstinate placenta?

At the same time there is nothing that brings the
Physician beginning practice into good report sooner than a reputation for skilfully and successfully managing his Midwifery cases, especially if he exercises towards his patient that kindness and consideration, that Humanity, which, surely under the circumstances they deserve.

This was pointed out a century and a half ago by Dr. Smellie. (1). He says "But, over and above the advantages of education, he (the Physician) ought to be endued with a natural sagacity, resolution and prudence; together with that humanity which adorns the owner, and never fails of being agreeable to the distressed patient; in consequence of this virtue, he will assist the poor as well as the rich, behaving always with Charity and Compassion".

How many "Grumblers" in the Medical Profession, owe their want of success in practice to their lack of sympathy with, and kindness to their patients! If they could but remember that their patients are fellow-beings, expecting and deserving consideration and encouragement it might be otherwise.

A Doctor, above all things, should be his patient's friend, and this holds good particularly in Midwifery,
as it inspires a confidence that cannot otherwise exist.

I propose to divide this Essay into two principal parts, as follows,

1. Concerning the methods adopted in managing Labour in its three stages and during the puerperium with reference to various practical points of importance to the Physician.

2. A short Analysis, and observations on interesting conditions which have been noted in the records of 500 cases.

PART FIRST.

Before commencing a discussion on the treatment of cases actually in labour, I should like to mention one difficulty which often besets the practitioner, and which always brings a certain amount of inconvenience, and sometimes some little discredit to him. This is the difficulty one has in getting reliable data, and information, from the patient or her friends on which to foretell, with some degree of certainty, the probable date of confinement. I have often had, from well educated women, perhaps pregnant for the third or fourth time, the most misleading statements with regard to catamenia, quickening, etc. To illustrate this I
mention three cases entered in my book during the last few months:


These cases tend to show how cautious the Medical Man should be in predicting a probable date of confinement, and in no case should he mention a date with certainty, as the blame for the trouble and inconvenience which usually follows, is certain to be put on his shoulders. The late Sir J. Y. Simpson, (2) drew attention to this difficulty. He says "I have taken notes of two or three cases in my practice, in which, after making the common calculation of 280 days, or nine months and a week from the cessation of catamenial discharge, pregnancy exceeded this period by several weeks, keeping the patients and their friends in a state of anxious waiting, and in all the instances, inflicting the unnecessary, as it proved, presence of a nurse in the house for a considerable time, before labour actually occurred."

He then mentions four cases in which labour occurred 313, 309, 296 and 301 days respectively after the date of last catamenium.

This difficulty also presented itself to the older writers. Smellie (3) records two cases in his practice
where he had predicted from what he considered certain signs, the dates of delivery. In one case five, and in the other eight weeks later than he supposed, labour actually occurred. In the first case he remarks the child was the largest he ever brought into the world. It is extremely difficult to devise how this trouble may be obviated, for if the Physician cannot rely on his patients' statements he has no means of obtaining reliable facts for himself, except by abdominal and vaginal examination, to which the patient, in private practice, will not submit.

Therefore it behoves him for the sake of his future reputation and peace of mind, to be extremely cautious on this point.

THE FIRST STAGE OF LABOUR.

There can be little doubt that it is during this stage more than any other time that the Physician must call into use his full stock of sympathy, tact and patience, with which to fully gain the confidence of his patient, and especially is this the case in a first confinement. For here the patient, new to the situation, and full of fear and nervous apprehension is brought for the first time into a peculiarly embarrassing situation with regard to her medical man with whom, probably, she is
on terms of intimate friendship.

Truly the situation is one requiring the utmost delicacy and tact on the part of the Physician.

Regarding this point Milne (4) says, "He (the Physician) ought to muster all the gravity he can, and show as much kindness and gentleness as possible. Nothing will inspire more confidence than these qualities, added to a manifest interest in the case". "While kindness is a gem a little patience is an invaluable jewel, and one highly prized by the poor woman in her distress". "Let us therefore, before even the humblest patient study to avoid the least manifestation of impatience.

It is perhaps scarcely necessary to emphasize the extreme importance of attending at once, if possible, on the first summons to the patient. If the Doctor, at least when sent for the first time, does not quickly answer the call, the patient and her friends, unreasonably perhaps, imagine he will be dilatory when urgently required later; but if he attends at once they have confidence in his future responses to their calls. If he finds he was sent for unnecessarily soon, (perhaps coming at great inconvenience to himself), he must on no account, at least before the patient, by word or manner betray the slightest sign of annoyance, remembering and sympathizing with, the natural anxiety
through which all concerned are passing. On subsequent occasions he may be somewhat more leisurely in attending but at the first call it is most important that he should not delay.

Without going into minute details as to what the Physicians Midwifery bag should contain, (which is a matter each should decide for himself), it would seem most advisable that he should take with him to his case everything he may be likely to require, except, perhaps, instruments which are required for the destruction of the child.

The indications for this extreme measure are usually such as give the medical-man time to procure the necessary appliances, and carrying them with him necessitates extra trouble and inconvenience.

Short of these, however, he should be prepared with everything he may require, and attention to this rule often prevents delay and inconvenience.

He should be most particular about having everything at hand in the way of antiseptics for the patient's and his own safety. If he has any abrasion on his fingers, especially if specific disease is suspected, it is extremely useful to paint collodion on the fingers to be used in making examinations etc. It is also very important that the Physician should carefully enquire about the state of the drainage of the patient's house.
and position of the proposed lying-in-room with regard
to W. Cs, and currents of air passing through the house,
sometime before the confinement is expected, and he should be perfectly satisfied with regard to these arrangements.

The question of antiseptics in Midwifery, and precautions to be taken for the safety both of the patient and Physician are ably discussed by, Hegar (5,6), Verchère of Paris (7,8), Axmann (9,10), C.M. Green of Boston, (11), J. C. Reeves, Ohio, (12), and Champion-nière (13).

When called to the patient's assistance, the presence of the ominous looking midwifery bag is unnecessary, just at first, in the lying-in-room, and this may well be left outside until required, when the patient is comfortably reclining on the bed, and ready for examination, and all through labour it is desirable that the patient should hear and see as little as possible of the Doctor's appliances.

There can be nothing more alarming for the patient, than the appearance, at her bedroom door, of the Doctor, bearing a formidable looking bag. She is full of nervous apprehension, being ignorant of the contents of the bag, and suspects it contains unknown horrors in the shape of "Instruments" which, later, are to cut and mutilate her.
Smellie (14), referring to this point says, "The operator ought to avoid formality in point of dress, and "never walk about the room with sleeves and apron: for, "altho' such apparatus may be necessary in hospitals, "in private practice it conveys a frightful idea to the patient and female spectators. These directions, however "trivial they may seem to old practitioners may be ser"-vicable to young beginners."

I have known a patient filled with alarm on seeing the Doctor unscrewing the cap of a small soap tube, and being intensely relieved on being assured of its contents.

A little thoughtfulness in this way may save the patient much unnecessary alarm, and the Physician should remember that his presence alone, (often his tap at the door), are sufficient to stop pains for a considerable time, without other such causes being added.

Calabin (15) referring to this, says, "The entrance of the accoucheur, however, is apt to put a stop to the "pains for some time, and he should, therefore, be careful "to avoid startling the nerves of the patient".

There need be no undue haste in making the first examination, but after friendly and cheerful conversat"-ion for some minutes with the patient and her nurse, during which he should ascertain that the bed is properly prepared etc., the Physician may approach the performance of this duty with becoming delicacy, and due consideration
for the sufferer's feelings.

Regarding this Leishman (16) says, "In proposing this "(examination), especially in women who are in labour for "the first time, we should never forget the consideration "which is due to the feelings of the patient, whatever be "her rank in life. For it cannot be otherwise than that "a woman must look upon such an examination as is necess-
"ary, by a person of the other sex, with apprehension, "if not with abhorrence; but if the necessity be first "explained to her in a few kindly words, she will rarely "fail to appreciate the good feeling which prompts "them, and will submit without a murmur to whatever "may be deemed essential, to her safety or comfort. A "similar feeling should guide us in everything we do in "the practice of Midwifery, and if so we shall seldom "fail to win the confidence of our patient."

After the first examination, during which the practiced "hand acquaints itself with all particulars regarding "the state of the os, presentation, (if possible), etc., he seems to find himself at once on a different footing, "as it were, with his patient, the ice having been "broken, so to speak, and there is no difficulty with "subsequent examinations. It is at this time that the "great advantage of having a well trained and reliable "nurse is much appreciated by the Doctor. How frequent-
ly it happens that the ignorant and unskilled woman, who calls herself a "nurse", and whose only experience in the work is that she may have borne twelve child-
ren herself, send unnecessarily soon for the Doctor, perhaps in the dead of night, who finds the patient is not in labour at all. These women, ignorant of the very elements of practical midwifery, cannot distinguish between true and false pains.

A few months ago I was sent for on four separate occasions, each in the night, by such a nurse, and the patient was not actually in labour till ten days after the last, and six weeks after the first occasion.

During this, often trying and protracted, the Physician must exercise all patience, cheering and encouraging his patient, and making digital examinations as seldom as possible, consistent with keeping himself aware of how matters are progressing.

The two untoward phenomena mostly to be noted here, are the two early rupture of the membranes, and the undilat-
ing os. For the former, generally, only time and pat-
tience are required, for the latter, when the patient is getting worn, and general rest for the body and mind is indicated, I have found nothing better that the adminis-
tration of freshly prepared pills, containing each \( \frac{1}{2} \) a grain of opium, given, one every half hour till sleep results, limiting the number to be taken to four.
As a rule, after the administration of the second, sleep results for some hours, followed by rapid dilatation and speedy delivery.

The late Sir J. Y. Simpson (17) under "Indications to be fulfilled by opium in Labour" mentions the following, "To suspend and control irregular and useless uterine pains, when the pains in fact become spurious. To allow the exhausted powers of the Uterus to revive by rest. To allow the tissues of the os to become relaxed, when there is no fear of pressure, and the patient is not able to bear venisection". He also lays down these rules for its exhibition. "Never suspend by it the uterine contractions, when they are regular. Whatever preparation of the drug is used, and whether it is administered by the mouth, by the rectum, or hypodermically, let the dose be large". Many remedies have been resorted to for the dilatation of the rigid os.
Formerly venisection, tartar emetic, etc. were advised. Playfair (18) says "Among those most frequently resorted to was venisection, and with it was generally associated the administration of nauseating doses of Tartar Emetic. Both these act by producing temporary depression under which the resistance of the soft part was lessened."

Leishman (19) after referring to the two remedies above says, "We have, however, in chloroform a far preferable agent which in such cases, exercises a most powerful
influence upon the rigidity of the os. Galabin (20) recommends a method of dilatation of the os by a hydrostatic dilatation. Churchill (22) says 'In such cases it has been found that incision of the cervix, by liberating the head, affords the mother and child a much better chance than any other method.'

In extreme cases I have resorted to chloroform, and digital dilatation with the aid of a strip of soap, with much advantage.

In one case in the Maternity Hospital, when the first stage had lasted during five days, and the patient was extremely exhausted, and showing symptoms of mental derangement, all other remedies having failed, my colleague and I kept her eight hours under chloroform, almost continually, soaping the os without intermission, and eventually forceps were applied through a partially dilated os, before delivery resulted.

Altius (21), who lived at the end of the fourth century, in his Chapter De Uteri Situ, say "The parts are like-wise to be rendered soft and distensile with lubricating ointments and fomentations; the mouth of the womb, must be dilated with the fingers, and the child extracted by force; but should this method fail, the foetus must be cut in pieces and brought away by little and little". From this, then, it is evident that manual dilatation of the os was practised by the physicians many centuries ago.
On the whole it would seem that the less the Physician interferes or is present during this stage, the better for the progress made, though it is true that towards the end of the stage, he can often assist greatly by gentle but firm digital dilatation of the os, if the latter is obstinate, and the patient becoming exhausted. I have known some hours of suffering prevented by this simple and safe means.

Dr. Milne (23), in recommending this digital dilatation says, "This is characterized by Denman as an 'abominable custom' and Churchill and the Irish School decry it also, "but we are quite convinced that it is quite a useful 'and harmless proceeding in certain cases".

Churchill (24) appears doubtful of the advantages of this method of dilatation and gives it only a qualified recommendation.

Braithwaite (25) on February 5th, 1879, read an interesting paper before the Obstetrical Society of London "On the digital dilatation of the os in Labour", in which he describes a number of cases in which other means of dilatation being "most unsatisfactory". He employed this method with success.

Delay in this stage is rarely serious, though it must not be forgotten that both the maternal and foetal mortality are sometimes influenced by the length of the stage.
THE SECOND STAGE OF LABOUR.

In an ordinary and natural labour, when good progress is being made, the Physician need have little to do with his patient, (beyond being within call if required), until the head is on the perineum. Then his presence in the room is desirable, if not necessary, for at any time a strong pain may expel the head, or in fact the child, and the medical man should, in all cases when practicable, be on the spot to take charge, though often in a busy practice, or in the country, this is a difficult matter to arrange.

There can be little doubt that no drug of any sort need be administered in this stage, though it is surprising how many medical men depart from this rule and give Ergot, Quinine etc.

The danger to the child from giving Ergot in this stage is evident from the tonic contraction of the uterine muscle, obstructing the placental circulation.

Dr. Hardy (26) found that the number of stillborn children after the exhibition of Ergot in this stage was very large; for out of 30 cases in which he gave it in tedious labour only ten of the children were born alive.

Playfair (27) says with reference to the danger to the mother of Ergot in this stage "The cardinal point to remember is that it is absolutely contraindicated".
unless the absence of all obstacles to rapid delivery has been ascertained. He, however, recommends the use of Quinine (28) as an oxytocic, remarking that he employs it in lingering labour with marked effect, and that it has none of the bad effects of Ergot. Leishman (29) observes "Ergot has been called in some books from its effect in hastening labour, the pulvis ad partum; as regards the child, it may, with almost equal truth be denominated the pulvis ad mortem". He remarks that to give Ergot when the os is undilated, and the soft parts rigid and dry, would be "Malpraxis in the worst form".

Churchill (30), recommends the use of Ergot in tedious labours if the pains are feeble, if the os is soft and dilatable, if there is no obstacle to delivery, if the head or breach is sufficiently advanced, and if there is an absence of head symptoms and general irritability in the patient.

I have never found it necessary to give anything beyond good light and nourishing diet, and stimulation should be avoided unless special circumstances arise.

Sir J. Y. Simpson (31) regarding this says "Give the patient nourishment of the lightest form; avoid all "stimuli, bodily and mental."

If the pains are becoming less frequent and severe, a binder firmly applied, will in most cases insure their
return and frequently speedy delivery will result. The hand, too, firmly placed over the fundus, and gently stimulating it, is often of much assistance in causing good useful uterine contraction.

Altius (32), an ancient practitioner, recommends various quaint remedies for this form of uterine inertia such as "Seating the patient over warm steams and fumigations in a place conveniently warmed; by pouring into the vagina warmed oils, and by the application of emollient ointments and cataplasms, carrying about the patient in a litter, and subjecting them to violent concussions".

In many cases, especially where a good nurse is not in attendance the administration of an Enema, followed by the successful emptying of the rectum and bladder, often is followed by a speedy descent of the head, and delivery. A loaded rectum or full bladder would seem to be frequent causes of delayed progress in this stage. This fact was well recognised by the very early writers on the management of labour. Moschion (33), who practised in Rome in the time of Nero, advises us to "draw off the water with a catheter, and prescribes a "clyster for the indurated faeces, and orders the "membranes to be pierced with a lancet". Altius (34) also recommends the same treatment.
Of the recent writers Leishman (35) observes, "any irritation of the intestinal canal may not only excite powerful reflex contraction but may cause irregular uterine action and in other cases may arrest it altogether; this being one of the many reasons why tardy and precipitate labours are always considered together.

... a distended bladder or rectum, may in addition to the mechanical impediment which it constitutes, act injuriously in arresting uterine action".

The timely rupturing of the membranes, when this is a safe proceeding, by the Physician, is one of the simplest ways of forwarding delivery, and one which, in many cases, saves many hours of unnecessary suffering. I always adopt this means as soon as the passages are sufficiently dilated, with nothing but good result.

Sir J. Y. Simpson (36) warns us "to be specially guarded against it in first labours". Playfair (37) recommends us to rupture the membranes before the os is fully dilated in some cases, especially when the Liquor Amnii is excessive.

When no bag of waters descends in front of the head, which occurs when the head so completely blocks the passages that the waters cannot pass, rupturing must be done with great care. Smellie (38) says, "In this case they must be scratched a little during every pain with the nail of a finger, which, though short and smooth
"will, by degrees, wear them thinner and thinner until they
split upon the head by the force of labour". It is
sometimes difficult for the inexperienced to decide
whether or not the membranes have ruptured, if there
is little liquor amnii, and mistakes have occurred when
nurses or students have scratched the foetal scalp with
hairpins, or other sharp instruments. There should be
little difficulty in distinguishing between the rough
and sometimes hairy scalp, and the smooth bag of
membranes. In olden days the membranes were not rup-
tured without much consideration and care. Smellie
(39) describes a case in which the "womb had been
fully opened" for many hours, the patient becoming
exhausted "from flooding", and the friends anxious, he
at length decided to rupture the membranes, which was
followed by speedy delivery. He adds "but as I have
frequently known tedious and lingering cases proceed
from too much precipitation in breaking the membranes, I
chose rather to err a little on the other extreme,
provided the patient is in no danger from weakness or
flooding".

The nurse's or patient's word, should never be accepted
by the Physician, as to whether or not the membranes
have ruptured, and waters escaped. He will find him-
self often misled and deceived in this matter if he
he does not take the trouble to ascertain this fact for himself, vaginal discharges, and even rushes of urine are often mistaken by the ignorant for the escape of Liquor Amnii.

The Physician can often also materially assist his patient by gently pressing up, over the descending head, with his fingers, any part of the passages that may be forced down in front of it, and holding them up during a pain.

It is usually the anterior cervical lip that is forced down in this way, and if it is pushed up carefully and without force, as pointed out by Leishman (40), it is not unnecessary interference, and being apparently safe, and often very useful, may be recommended. Some writers holding that "middlesome Midwifery is bad Midwifery", condemn this practice altogether as being useless and dangerous. Rigby (41) says "all attempts to push it "(the anterior lip) above the head are objectionable .... "the efforts to push it up only inflame it and increase "the swelling".

Sir J. Y. Simpson (42), however, advocates this treatment; he says "Support and dilate the lip of the os uteri "during a pain. When the os is dilated, push up the "segment above the head". Playfair (43) says "This "manoeuvre, if done judiciously, and without any undue
"roughness or force, is certainly not liable to be attend-
ded by any of the evil consequences which many obstet-
icians have attributed to it".

If the passages are hot and dry, from the absence of the
natural vaginal secretion (and this is not uncommon
in nervous or hysterical patients, and in primiparae)
they may, with advantage, be moistened with some anti-
septic lubricant, such as carbolized vaseline.

Smellie (44) recommended lubrication with "Pomatum,
hog's lard, or butter", showing the extent of anti-
septic midwifery in his day.

The Physician should encourage his patient not to call
out during a pain, but to hold in her breath, which
materially assists the abdominal muscular power, and
hastens delivery. She should also pull on a towel firmly
tied to a bed post for the same reason, as recommended
by Galabin (45).

Various methods were adopted in the beginning of last
century to hasten delivery when labour was lingering,

Smellie (46) recommended the administration of amber,
castor, myrrh and volatile spirits, "to quicken the
"circulating fluids".

When the downward progress of the head is retarded by
the cord being twisted round the neck he directs (47)
that two fingers be introduced into the rectum, and by
pressing on the forehead of the child at the root of
the nose, prevents the descent of the head 'until the
placenta is moved lower' and the cord relaxed.
It sometimes happens that the pains die away altogether
and do not return, even after a considerable interval of
rest has occurred. This is usually seen in the multi
parous women, where the muscular abdominal power is
weak, especially if the first stage has been prolonged
and severe. In these cases, if there is not too much
obesity, if the passages are fully dilated, and all
other conditions are favourable, it would seem that
firm supra pubic pressure in the proper pelvic axis
(as in Grèdes' method of expressing the placenta) is a
perfectly safe, and apparently useful means of delivery.
This method is strongly recommended by Galabin (43) and
other writers. Pressure should, of course, be used only
at intervals, simulating uterine pains as much as
possible.

Other methods for stimulating uterine contraction have
been recommended by Drapes (49) advocates 10 - 15 minim
doses of vin. Ipecacuanha, every ten minutes, till
contraction returns. Stokes (50) has also used this
drug, during twenty one years, with success; Verney (51)
recommends Acetanilid, 3 or 4 grain doses, as being use-
ful. Bossi, of Genoa, (52,53) advocates the use of
Hydrastis Canadensis, which he says is "infinitely
"preferable to Ergot" either for uterine inertia or for
flooding during or after labour, given in doses of 100 to 200 minims.

One of the most tedious labours occurs when the membranes rupture early in the first stage, when the breech is presenting, and in such a case recently five and a half days elapsed before the passages sufficiently dilated to enable me to expedite matters, and after a very difficult labour during which, naturally, the child suffered much, both did well.

The danger here is principally to the child from the more or less constant pressure of the uterus on the cord, though in olden times the circulation through the cord was not considered of such great importance to the child. Smellie (54) after describing the difficulties sometimes experienced in removing the cord twisted round the child's neck says "the child is in no danger of suffocation from the stricture of the funis, because it seldom or never breathes before the breast is delivered."

He describes (55) three cases of lingering labour from early rupture of the membranes, where three, two and four days and nights respectively, passed between the escape of the waters and delivery. In the last case he humourously represents the elaborate preparations of a "gentleman of very little experience in midwifery", who was about to deliver the woman by turning.

Dr. Smellie on examination found the os the size of a
two shilling piece! He adds "I have known the mem-
'branes broke several days, weeks and even months
'before labour, and provided the patients were not
'much weakened, they have been delivered with ease".
The application of forceps in this stage is a question
that here naturally arises; and it is one on which,
apparently, medical men widely differ. It would
seem that with many men the application of forceps is
a matter of temperament. The cool, patientman,
(having an eye to his patient's safety as well) will
be content to leave things to nature, at the cost of
time and convenience, while the hasty and impatient
one, will often selfishly and unnecessarily apply
forceps to suit his own convenience, even with risk
to his patient.
I think it may be laid down as a safe rule, that as
long as things are progressing, and the presenting
part descending surely, if slowly, and if the patient's
strength is even fairly well maintained, and there is
no danger from exhaustion, forceps may be withheld.
When however the patient is becoming exhausted, and no
progress is being made, the head being within reach,
and other conditions are favourable, no time should
be lost in applying them. Sound judgement in deter-
mining the suitable circumstances, and proper time
to apply forceps, and the power to dexterously apply
them and expeditiously to deliver, are all important factors in the practitioner's success in midwifery and many a reputation has been made through the possession of these faculties. Smellie (56), in his time, recognised the importance of artificial interference by forceps and turning in cases of laborious labour and gives seven conditions under which he considers this interference necessary. Proceeding, he describes how the crotchet became unpopular owing to the outcry caused by many maternal and foetal deaths consequent on its use, and how this "stimulated the ingenuity of several gentlemen of the profession to contrive some gentler means of bringing along the head, so as to save the child, without any prejudice to the mother".

Continuing he describes how, as a safer measure the forceps were first used by one Chamberlen and his sons, early in the seventeenth century with success.

Formerly the common way of using the forceps had been "by introducing each blade at random, taking hold of the head anyhow, pulling it straight along and delivering with downright force and violence", with results that can be easily imagined. He also describes the forceps and methods of using them, of Chapman, Giffard, and Gregoire of Paris, and lastly the events which caused him to consider the mechanism of natural labour as applied to the construction and use of forceps, which
led up to the invention of the instruments bearing his name.

He discourages the use of lack and fillets, even the form of the latter communicated to him by "the learned Dr. Mead in 1743", and was "obliged to have recourse to the forceps" which "being introduced with greater ease, and fixed with more certainty, seldom failed to answer the purpose better than any other method found out."

In order to avoid inflammations and lacerations of the parts; to disable young practitioners from running risks from using too much force, and to free myself from the same temptation", he used and recommended forceps so short in the handles, that they could not be used with violence, though with sufficient purchase to extract the head.

He lays down the method of applying his forceps with great care and precision, and evidently had great skill in their application, for, as he describes, by producing them from under the sheet "that hangs over the bed", he was able to deliver "without the knowledge of forceps having been used, by the patient, or any of the assistants". He also describes several artful (but surely embarrassing) means, by which the forceps may be concealed, so fearful were they of instruments in those days. He concludes his instructions for the secret application of forceps, with these words, (57) "The next care is
to wipe the blades of the forceps, singly; under the
cloathes, slide them warily into your pockets, and del-
iver the placenta".

Milne (58), says, regarding the application of forceps,
'The great thing is, then, not to employ the forceps
when they are not required, and not to delay applying
them when they are really needed".

Churchill (59) says, "in no case is the forceps, (or
indeed any instrument) to be applied, until we are per-
factly satisfied that the obstacle cannot be overcome by
the natural powers, with safety to the mother and child".

Playfair (60) observes the rule laid down by Johnston (61)
'So long as nature is able to effect it's purpose, without
prejudice to the constitution of the patient, danger to
the soft parts, or the life of the child, we are in duty
bound to allow the labour to proceed, but as soon as we
find the natural efforts are beginning to fail, and after
having tried the milder means for relaxing the parts of
stimulating the uterus to increased action, and the
desired effects not being produced, we consider we are in
duty bound to adopt still prompter measures, and by our
timely assistance, relieve the sufferer from her distress,
and her offspring from an imminent death".

Sir J. Y. Simpson (62) remarks "Wait to see what nature
can effect, not what she can endure. As soon as it is
"certain that interference is necessary, and the pass-
ages are in a fit state", it is time to apply forceps.
With regard to the most useful pattern of forceps to use,
it would seem that the axis traction are far and away
the best, and most especially are they invaluable in
high cases, where the head is "nodding" at the brim,
and where the passages are narrow, as in primiparae
and the vulva small, causing the perinaeum to be in
jeopardy. I think there can be no doubt, when the
pelvic axes are duly considered, that with no other
forceps can one pull in each and every axis. With
regard to the safety of the perinaeum, Milne Murray (63)
says, "For ten years I have used these instruments, in
cases of all sorts, occipito-posterior, face cases,
rigid perinaeum, flat pelvis, etc., I have never yet
injured the perinaeum on any occasion, beyond the
slight split in the margin of the mucous membrane,
which is inevitable in all first labours, and conse-
quently during that time I have never put a stitch in
a perinaeum."
I have known men who did not use these forceps tear
the perinaeum four times out of five, and they have
sent for me to assist them in what they considered
their worst cases, and every time I have saved the
perinaeum. I have also been sent for to assist a man
who was unable to deliver with his (ordinary) forceps, and I have found that I could not either, but on the substitution of my axis traction for his forceps, delivery resulted in a few minutes, and this not due to any extra skill or care on my part, but simply, as I believe, on account of the superiority of the axis traction over any other pattern of forceps.

Medical men in the South are rather inclined to disregard the importance of axis traction, but since I have been in practice four fellow practitioners of my acquaintance have taken to them with, as they assert, the greatest advantage. The usual objection made to them is the difficulty of manipulating the traction rods and screw, but this, in the hands of one accustomed to them, is no objection at all, and they can be applied as easily and rapidly as any other, while the ease and rapidity with which delivery results far more than makes up for any small drawback in unaccustomed hands.

The great advantage of axis traction forceps in flat pelves is well illustrated by Milne Murray (54) in his description of the case operated on by him in the Edinburg Maternity Hospital in the Autumn of 1890, when he delivered a woman with a pelvis having a true conjugate of 2.75 inches. Being present, as one of the Residents in the Hospital at the time, I was
deeply impressed with the ease with which delivery resulted, after once the forceps were fixed. Such an exhibition of the wonderful power and efficacy of axis traction naturally left a profound and lasting impression.

The credit of the discovery of axis traction is due to Tarnier of Paris, who first invented these forceps. They have since been modified by Professor Simpson, of Edinburgh, and Milne Murray till now, probably, perfection has been reached. Milne Murray (65) read a most excellent scientific paper before the Edinburgh Obstetrical Society, on February 11th, 1891, in which axis traction, and its application to the construction of forceps is most lucidly detailed. This paper was ably criticized by Prof. Simpson and other eminent Obstetricians. Professor Simpson has himself (66, 67, 68) contributed several learned and valuable papers, devoted to the exposition of the axis traction principles, and a description of his special adaptation of Tarnier's invention to the J. Y. Simpson instrument, which he has modified in various ways.

Before leaving this subject I would add that I never apply forceps without first informing the patient's friends, (not necessarily asking their permission), and this is a safe rule, and may be of much service, should any untoward event occur. In the words of Sir J. Y. Simpson (69)
"Tell the relations always; the patient generally".

With regard to the administration of chloroform in this stage, it would seem that much unnecessary pain and suffering may be saved to our patients by this means, and after all, why should we not do all in our power to mitigate their distress?

Churchill (60) observes that "Chloroform, in full doses, is capable of entirely removing the pain of obstetrical operations, and thereby increasing the facility of their performance, moreover the dose can be so graduated as to afford degrees of relief, so that, in natural labour, a certain amount of suffering may be spared without producing insensibility, or incurring the risk, whatever that be, of a full dose".

Other methods of producing anaesthesia in labour have been suggested by Lefour, of Bordeaux, (71) who used "mental influence", or "suggestion" in bringing about a premature labour. Fraipont, of Liége, (72,73) advocates and describes hypnotism in labour, with an account of a successful case. This method is also recommended by Kingsbury, of Blackpool, (74), and Luys, of Paris, (75) who also describe cases. Chaigneau (76,77) has made a comparative study of all the anaesthetic agents, as yet employed in parturition, antipyre, Chloral, Cocaine, as an ointment on the cervix, etc., but concludes that
chloroform is far preferable to any. I have made it a rule for myself that when the head is well within reach of the forceps, and the patient is suffering much, bodily or mentally, or more particularly both, it is best to give it. I say when the head is well within reach, because then, even if the pains cease entirely, one is master of the situation, and knows that delivery is in one's power. With regard to this Lusk (78) says, "The anaesthetic should not be pushed to the stage of complete unconsciousness, until the head begins to emerge at the vulva".

With regard to the important subject of the immunity to the poisonous properties of Chloroform of parturient women, and the consequent safety of its use in obstetric practice, Hare (105) observes, "that while the journals fairly teem with reports of chloroform deaths, when the anaesthetic has been given for ordinary operations, death from this drug in parturient women is almost unknown". He gives, as one of the latest views of the cause of this immunity, that the temporary hypertrophy of the heart's muscle, consequent on pregnancy, so strengthens the cardiac power, that the drug does not so easily depress it.

In the great majority of cases, fortunately it is quite unnecessary, but under the above circumstances, if the patient clamoured for Chloroform, I would not withhold it,
and I have never seen the slightest bad result from it's administration, and one certainly gains one's patient's gratitude. I think we may safely act up to the rule that it is our duty to save our patient as much suffering as we can, consistent with her safety, and chloroform is one of our most useful means to this end.

Playfair (79,80) lays down this rule to be remembered in giving chloroform in the propulsive stage, that it should be administered intermittently, and never continuously. He also reminds us of the tendency of chloroform to produce uterine relaxation, and warns us to take more than ordinary precautions against post partum haemorrhage when it has been freely used.

Breech cases often present considerable difficulty and at full term usually much trouble and delay. It is important, (as has been previously pointed out), in these cases, not to rupture the membranes until the head has descended well into the pelvis, since they serve to dilate the genital passages better than the presenting part. This point is insisted upon by Playfair (81), Simpson (82) and Galabin (83).

During the actual delivery besides the difficulty of freeing the arms, and bringing them down, the head, often jammed at the pelvic brim, extended in one of the diameters, is frequently most troublesome in delivery.
Probably the reason why many men fail here, is that they do not sufficiently flex the child's body over the mother's abdomen, using firm supra pubic pressure on the head, in the proper pelvic axis, (as in expelling the placenta) after the method described by Leishman (84). This method was apparently unknown in Smellie's time. In describing (85) the difficulties in extracting the head by force, he never suggests supra pubic pressure, or flexing the child's body, but if he finds delivery unpracticable, he recommends perforation of the foetal Skull.

Reynolds of Boston (86), recommends a plan which he himself adopts, and describes its mechanism, in which "traction is made vertically downwards towards the floor, no attention being paid to the arms."

I have occasionally been called to the assistance of a midwife, or fellow practitioner in difficulties in such a case, and found that by seizing the front part of the foetal body firmly in the palm of the right hand, and strongly flexing the body over the mother's abdomen, and using proper supra pubic pressure, after the method described by Galabin (87), and Playfair (88), delivery speedily resulted. With regard to this the latter says "It is very seldom indeed that a judicious combination of traction on the part of the accoucheur, with firm
"pressure through the abdomen applied by an assistant, "will fail in effecting delivery of the head, before "the delay has had time to prove injurious to the child". Chloroform materially assists here. I have never required to apply forceps to the after coming head, as advocated by Meigs and Rigby (89), and fully described by Barnes (90), but once I saw a medical practitioner apply them, the blades being between the foetal back and the maternal pubis, instead of between the perinaeum and the child.

Difficult occipito-posterior positions, where forward rotation of the occiput does not take place, though of somewhat rare occurrence, are probably more common than text books would lead us to suppose. Uvedale West (91) found after careful study, that labour ended in this way in 79, out of 2,585 births, all the deliveries being exceptionally difficult. In the majority of these cases the application of forceps is desirable, if not necessary.

THE THIRD STAGE OF LABOUR, With special reference to the prevention of post partum haemorrhage and after pains.

The skilful management of the third stage of Labour is of the utmost importance for the safety and after-comfort of the patient. For here, by exercising due care, and attention to the physiological principles, much
danger and after trouble may be averted.

Playfair (92) says, "There is unquestionable no period
of labour where skilled management is more important,
and none in which mistakes are more frequently made." 

Galabin (93) remarks "In ordinary cases of labour, a
correct management of the third stage is the most
important of all the duties of the physician; and it is
at this stage that erroneous practice is still most
frequent".

Lusk (94) also, and many other writers, urge the impor-
tance of careful management of this stage. The great
rule to observe is this; The left hand, having followed
the contracting uterus through the latter part of the
second stage, should descend with the fundus till the end
of that stage, and be retained there, keeping the uterus
under control, for sometime after the completion of the
3rd. Stage. By this means the uterus is entirely under
the control of the medical attendant, and if closely
observed, he has it in his power, by gentle manipulation
(not irritation) to maintain firm contraction if required,
but also to permit the necessary expansion and relaxation
for separation of the placenta.

("Irritating the uterus is to be carefully avoided and is
unnecessary", if practized it certainly tends to cause
haemorrhage and trouble, later).

It is not necessary that a firm grip be maintained, but
the ulnar edge of the left hand, placed transversely, an inch or two above the fundus, in a "this far; and no "further" position, is all that is required. If the uterus suddenly expands, threatening a filling of it's cavity with blood and clots, gentle compression controls this, and keeps it within bounds. Some medical men ignore this rule altogether; leaving the uterus entirely to take care of itself in this stage, tying the cord, and attending to the Child etc., themselves, and with these men post partum haemorrhage, and severe after pains are of no rare occurrence.

It is sometimes difficult, or impossible to follow this rule; if there is no one present to tie the cord, or, as is frequently the case in poorer class practice, the "nurse" is unwilling or incapable of doing so, the physician must, per force, do it himself as speedily as possible, and then return to his charge. With regard to how long one should wait for the natural expulsion of the placenta and membranes, I have made it a rule for myself, if expulsion has not, occurred within ten or fifteen minutes, to expel it by Credes method, and this happens in nine cases out of ten, and always with good result.

Hippocrates (95), who practized medicine in Greece 460 B.C. in his book "De Superfoetatione", says, "If the "secundines come not away easily, the child must be left
"hanging to them, and the woman seated on a high stool
"that the foetus, by its weight, may pull them along". 
Sir J. Y. Simpson (96) recommends us to "wait for ten
"or twenty minutes to see if expulsive pains recur to
"expel the placenta... If the placenta be still in the
"uterus, reexecute uterine contractions by friction, cold
"or warmth, slight traction on the cord, but, above all
"by compression on the uterus... When these means are
"insufficient, at the end of an hour pass your hand into
"the uterus and extract the placenta".

With the expulsion of the afterbirth the medical
attendant's duties by no means end, though with many
men it would seem that its appearance is the sign for
their immediate departure. For it is now that by
exercising a little patience and self denial that much
after pain may be saved the patient. By retaining the
hand over the uterus for 15 to 30 minutes, the
contraction caused thereby allows the uterine sinuses
plenty of time to be filled with proper clots, so that
when, later, the necessary relaxation occurs, oozing
into the cavity is minimized and the formation of clots
and the consequent after pains are lessened in
proportion. This care together with the proper
administration of ergot will, I am convinced, save
many an hour of suffering to the multiparous patient,
and I have notes of many cases that I have attended in
subsequent labours to other men who did not take this precaution, and in every case gratitude was expressed for comparative freedom from after pains. There can be no doubt that there is a great temptation for the Doctor, probably after a wearisome labour, in the night time, and with the prospect of a heavy days work before him, to take his departure as soon as possible, but a little consideration for his patient's comfort costs nothing, gains much gratitude, and often adds to his reputation considerably.

Smellie (97), recommends for the prevention of after pain "as soon as the placenta is separated and delivered, the hand being introduced into the uterus, may "clear it of all the coagula".

With regard to the administration of Ergot, in some cases it is apparently unnecessary, and cases do just as well without as with it. Especially is this true in primiparal, after a normal labour, but I make it a general rule to have a drachm ready at hand, and to give it immediately the placenta and membranes are born.

More especially in multiparal, or where there is the slightest suspicion of a flabby uterus.

In private practice it is preferable to give Ergot by, than to inject Ergotin subcutaneously, for obvious reasons, the patient dreads a hypodermic syringe.

The advantages of the subcutaneous injection of
Ergotin were ably discussed by Dr. Chahbazain of Paris, (98).

Although there is no doubt that douching is most advantageous, if only for cleanliness sake, not to speak of the prevention of fever, it is extremely difficult to manage it with private patients, in England at least, as they have an intense objection to it, so except in occasional cases, I have had to discontinue it, unless special circumstances make it imperative.

In the majority of cases, the expulsion of the placenta by the method advised by Credé, is very easily accomplished by skilled hands, but sometimes there is a strong spasmodic contraction in the neighbourhood of the os, and no amount of supra pubic pressure will expel it. It is here that one of the greatest advantages of chloroform in midwifery is manifested.

After a few deep inhalations by the patient, the slightest firm pressure will dislodge the afterbirth and expel it. This form of 'hourglass' contraction, it is true, should never occur in skilled hands, and is usually the result of too much interference, and consequent irritation of the uterus on the part of the attendant. I have usually found it happen to Students in out-door Maternity cases, who, being over anxious, have been too assiduous in making vaginal examinations; or in unskilled midwives and nurses who have pulled
on the cord. In the most obstinate case of this sort I have seen, on my arrival I found the midwife standing with the cord in her hand, torn off at its attachment to the placenta in her frantic endeavours to remove the afterbirth by hauling on the cord.

Regarding this cause of "hour glass contraction" Rigby (99) says, "the most frequent cause is from over anxiety to remove the placenta; the cord is frequently pulled "at and at length the os uteri is excited to contract". Braun (100) says, "Abnormal adhesion, and hour glass "contraction are more frequently encountered in the "experience of the young practitioner, and they diminish "in frequency in direct ratio to increasing years". Duncan (101) and Johnstone (102) also ascribe it's cause to mismanagement in the third stage.

Hour glass contraction, and post partum haemorrhage were probably common occurrences formerly if the rule laid down by Smellie (103) was rigidly observed. He says "In order to deliver a placenta, take hold of the navel string "with the left hand, turning it round the fore and "middle fingers .... then pull from side to side". Traction on the cord is also recommended by Churchill (104). In true "adherent placenta" the case is quite different, for here the placenta is usually firmly attached, by fibrous tissue, to the uterine wall, and in many cases must be detached by the fingers, using the strictest
antiseptic precautions. In all such cases, it is most advisable that douching should be insisted upon twice daily for at least a week after delivery, and I have always found the result satisfactory. With regard to retained membranes, I have known not a few cases when from their brittleness, or from some firm adhesion, I have had much difficulty in removing all. In such cases, with the strictest antiseptic precautions, the hand may be introduced and the membranes separated and removed, followed by an antiseptic uterine douche. When much difficulty is experienced in reaching and removing these membranes, it is a question how long the attempt should be continued, and I have found it better to leave them in situ to be absorbed or expelled during uterine involution, than to irritate the uterus by retaining the hand there too long. In the case where a portion of the membranes were thus left, and the patients were carefully doused two or three times a day for about ten days, I have known no bad results, at the time, or later, and no unusual rise of temperature.

Playfair (106) remarks that in some cases there is reason to believe that considerable masses of retained placenta tissue have been entirely absorbed, and adds "at the best it is far from easy to remove all, and it is wiser to separate only what we readily can, that to make
"too protracted efforts at complete detachment".
Churchill (107) recommends the same, adding that if in consequence of the retention of the membranes, an offensive vaginal discharge should result, injection of tepid milk and water should be used twice a day.
Barbour (108) read an important paper before the Edinburgh Obstetrical Society, in which he draws attention to the great importance of carefully examining the membranes and placenta after delivery to ascertain if any portion has been left in utero, calling attention also to the danger of such in producing post partum hemorrhage and septicoemia, as well as the relation of retained membranes to endometritis.
I know of one case where the membranes were torn off close to the placenta allround, and where the medical man in attendance (a fellow practitioner) had much difficulty in removing them owing to firm adhesion, he resolved to leave the greater part in situ, and with regular after douching the temperature did not rise above 100 degs., and the patient did well.
With adherent placenta it is different, and I have never, knowingly, left the slightest portion of one behind, but then it is more easy to distinguish and remove a portion of the placenta than a small piece of membrane.
Formerly Hippocrates (109) recommended that if the afterbirth did not come away immediately after labour, it should be left in utero, adding "For the most part it putrifies and comes away about the sixth or seventh day, or later". As a remedy for this he prescribed "mugwort, cretan dittany, flowers of white violets, leaves of agnes cactus, with garlic boiled or roasted, small onions, castor, rue and black wine".

Altius (110) observes that if the placenta does not come away after an attempt has been made to extract it by the hand, and poultices and injections have failed, that it should be left in utero to putrify and come away later.

It is with much thankfulness that I record that I have never had a case of true post partum haemorrhage in my own practice, though I have been occasionally called to assist a fellow practitioner in such a case. In every case I have seen hot water injected according to Milne Murray's (111) principle, and the hypodermic injection of Ergotine, with proper kneading of the uterus, have been perfectly satisfactory, and have stopped the haemorrhage very quickly. Formerly Smellie (112) recommended for this "cloths dipped in any cold astringent fluid, such as oxyerate, or red tart wine, may be applied to the back and belly"; also venessection
to five or six ounces, and packing the vagina with tow or linen rags. He records, in his "Cases in Midwifery" (113, 114) several cases of severe flooding, in which he found opiates, and cloths dipped in vinegar applied to the vulva, useful.

Playfair (115) observes "there is no emergency in obstetrics, which leaves less time for reflection and consultation, and the life of the patient will often depend on the prompt and immediate action of the medical attendant". He also remarks that it is, fortunately, a preventable accident, to a great extent, and would certainly be less frequent than it is, if the third stage of labour were properly conducted.

Chahbazain of Paris (116) recommends the hypodermic injection of ergotinine 1/200 of a grain in 10 minims of water, as acting most energetically and rapidly.

Leishman (117) has advocated "the injection of the uterine cavity with iced water, or the application to the inner uterine surface of a piece of solid ice", but this method has been proved by Murray to be inferior to the injection of water at a temperature of 130 degs.

Misvachi (118) advises the hypodermic injection of Caffeine, dissolved in benzoate of sodium, which he says stops the hemorrhage, and also acts as a stimulant, and he considers it of much use.
The nearest approach to post partum haemorrhage I have experienced among my own cases was when, after an exceedingly long and exhausting first stage, followed by mental symptoms, I was compelled to apply forceps through a partially dilated os, and delivery was followed by an alarming rush of haemorrhage. On examination it was discovered that a tear in the cervix had resulted in the rupture of the cervical artery. Here the hand was introduced, the cervix firmly grasped and held for a few minutes, and after the injection of hot antiseptic solution, and ergotin subcutaneously, no further bleeding took place. It would seem that true post partum haemorrhage should seldom (if ever?) occur, if proper treatment is adopted, and it is usually caused by ignorance or carelessness on the part of the person who is responsible for the management of the case.

Occasionally in non instrumental cases, usually in primiparas the perineum tears in spite of all the physician can do to prevent it. I have never found the tear thus occasioned to be so severe that stitching was necessary, and usually, antiseptic cleansing of the parts, keeping the knees together for a few days, has insured a safe and speedy union. Sir J. Y. Simpson (119) drew attention to this important point in seven conclusions before the
Edinburgh Obstetrical Society in 1851.

In order to prevent laceration of the perinaeum Playfair (120) recommends a method of supporting or "relaxing" the part, at the end of the second stage, also when the tension is very great he asserts that incisions may be made with perfect safety though this is rarely necessary, and seldom of much use. The reason given for this proceeding being that "an incised wound is likely to heal more rapidly than a lacerated one". Hart (121) has pointed out the disadvantages of the usual method of stitching the perinaeum, and recommends a new plan in which he stitches the muscular surfaces only, together, avoiding the skin and mucous membrane, and records a number of cases in which he used this means with advantage.

With regard to the resuscitation of the still-born foetus, I have found the most valuable methods to be Schultz's, mouth to mouth insufflation (with proper precautions) and dipping in hot and cold water alternately, followed by friction over the heart and body with alcohol.

Sylvester's method, too, is often very servicable, if performed slowly.

Buist (121) after detailing the disadvantages and dangers of Schultze's method, describes a new plan of treatment invented and practized by himself, and
advocates its use. Smellie (122) mentions the various and peculiar methods of resuscitation employed in his day, including rubbing the child's head, temples and breast with garlic, onion, and mustard; and if the placenta was born before the cord had been divided, he recommended "the placenta and as much as possible of the navel string to be thrown into a basin of warm wine or water, in order to promote circulation between them and the child.

Through what length of time may artificial respiration be kept up, with a hope of resuscitation? This is a question very difficult to answer. Smellie (123) records a case where the usual methods of artificial respiration including "holding an onion to the mouth and nose" had been tried for a considerable time without success, the child was laid by in a closet as apparently dead, about ten minutes after a whimpering noise was heard in the closet, the child was discovered alive, and did well.

I have known a foetus show no signs of life for 30 minutes, and then suddenly commence to gasp, and ultimately recover perfectly. In one case in the Maternity Hospital artificial respiration was maintained for 35 minutes, with no result, and foetus was laid aside as a hopeless case. A Student then took it up, with the idea of practicing Schultze's method
on his own account, and in a few minutes breathing occurred, the child recovered, and did well. Here 40 minutes must have elapsed before signs of life appeared. I have frequently worked with a child for 20 to 25 minutes before life became manifest.

Playfair (124) says "encouragement to persevere in our endeavours to resuscitate the child may be derived from the numerous authenticated instances of success after the lapse of a considerable time, even of an hour or more".

Cullen (125) records two cases in which normal respiration occurred after mouth-to-mouth insufflation for one hour and one hour and a half, respectively. In the latter case, the child was removed to another room, after the heart sounds became inaudible, when a slight spasmodic movement was noticed, and after the renewal of artificial respiration, the child recovered completely.

This, of course, is an exceedingly important point as in many cases much depends on the child living. So, probably, in these cases artificial respiration should be maintained for at least 45 minutes, or more.

A most important point to be observed, (and one frequently overlooked by the practitioner) is attention to the child's eyes, at the time of birth. The Doctor should see this attended to by the nurse, or better
still, (if he does not trust the nurse) should himself attend to it, before leaving the lying-in chamber.

If the eyes are carefully brushed out with weak boracic lotion, by means of a clean feather, at the time of birth, much after trouble, and serious danger from ophthalmia may be averted, and the doctor should see that his instructions for washing the eyes are daily carried out by the nurse. If disastrous results follow the neglect of this rule, clearly the Physician is to blame, therefore he should not attend a case of labour, without having the necessary provisions with him for this purpose.

Currier (126) points out that "a large percentage of the blind have lost their sight from this cause (ophthalmia neonatorium) and that it is a preventable or manageable disease, if attended to sufficiently early, it is not easy to consider any attention which may be given to the subject as excessive".

McKeown (127) writing on the ravages of this disease says, "It would be interesting to know the exact number of those totally blind in the United Kingdom from this affection .... There is one point on which Ophthalmic Surgeons are agreed viz. that the present resources of medical science are, if availed of in time sufficient to cope with the malady", Of the various
remedies that are suggested Dehenne (128) recommends ice water soaked in cotton wool to be applied to the lids frequently, with the application of argent nitrat. 7 grains to the ounce, once a day. Kalt (129) and Sym (130) recommend free flushing of the conjunctiva with Permanagant of Potash by means of a specially constructed laveur. Fromaget (131) earnestly recommends Formol. Tweedt (132) advises perchloride of mercury, or chloride of Zinc, if there is erosion of the corneal epithelium, and observes that the old fashioned alum lotion, if not always safe, is sometimes useful. Schmidt-Rimpfer (133) prefers chlorine water for instillation, twice daily, to nitrate of silver solution. During the puerperium, if it be normal and uncomplicated, the physician need have little anxiety with regard to his patient, though according to Matthews Duncan (133) no fewer than one out of every 120 women delivered or near full time die within four weeks of child birth. McKlintock (134) calculates the mortality in England and Wales 1, in 126. At the present day, however, when so much more attention is paid to antiseptic midwifery, and sanitation than formerly, it is most probable that the percentage of deaths during the puerperium, is much smaller.

With regard to the anatomical changes in the pelvis, met with during the puerperium Webster (135) has been
able, by sectional and dissectional study, to demonstrate theses from the frozen pelves of patients who have died on the 1st., 2nd., 3rd., 4th., and 15th. day after delivery. The illustrations he produces are most interesting and instructive, and the details scientific and accurate. The question of dietary, during this period, is entirely a matter of opinion, and is one on which practitioners, it would seem, have widely different views. For myself I recommend food of the lightest kind consisting of bread and butter with weak tea, milk, toast etc., for the first three days, though on the 2nd. and 3rd., all things being favourable, I allow stewed fruit, or baked apples, for the mid-day meal, as these tend to render the first action of the bowels more easy. A purgative (Liquorice powder preferably) should be ordered for the morning of the 3rd. day; and this rule I consider important. Some authorities say "Follow Nature, and if there is no headache, or other trouble, do not give a purgative at all, but wait for a natural action". This is surely a mistake, and I have known much trouble result from collections of faecal matter in the rectum later, and the bowels should be relieved satisfactorily every second day at least during the puerperium. Formerly extremely low diet during this period was insisted upon. Smellie (136) says "till the ninth day
"after delivery they ought to eat little solid food, and none at all during the first seven days". On the other hand Oldham (137) recommends quite a solid dietary from the first. If the patient is delivered early in the morning, she may have "her luncheon of digestible meat at one, tea at five, and her dinner with chicken at seven". Lusk (138) observes "It is equally desirable on the one hand to avoid exciting colics and catarrhal affections of the stomach, by too early resorting to a substantial regimen, and on the other to remember that the speedy establishment of an abundant milk secretion, is apt to be hindered by subjecting women to a process of semi-starvation". Formerly purgatives were given with great caution during the period. Smellie (139) warns us to "beware of throwing up stimulating clysters, or administering strong cathartics lest they should bring on too many loose stools, which sometimes produce fatal consequences".

I have never found any difficulty about the first act of micturition, even in primiparae, and after difficult instrumental labours, and if any trouble arises, a hot sponge held to the vulva is usually effective. Catheterism should certainly be avoided, unless absolutely necessary.

As I have said, douching, though useful in every case, is almost impossible in general practice, unless
special circumstances demand it, and then, perhaps, Condy's fluid is the safest and most useful antiseptic to employ.

Croom (140), in an interesting discussion on 'Should antiseptic vaginal douching be made a routine practice in the puerperium' at a meeting of the Edinburgh Obstetrical Society, July 1894, in recommending the practice said 'In private practice the conditions and environments are, no doubt, somewhat different, but even then the principle is the same; and where douching can be carried out carefully and skillfully, I consider anyone who neglects it, assumes a very serious personal responsibility'.

Professor Simpson observed 'that any practitioner who had lost a puerperal patient from septic mischief, ought to have great misgivings in his mind as to whether all had been done that might have been done to save her, if he had not made free use of the intra-uterine douche'. At the same time Prof. Simpson thought that if the practitioner has taken strictest antiseptic precautions in conducting his case there is little likelihood of danger, and therefore, in such a case, twice-a-day douching would inconvenience the patient and might introduce new elements of danger.

In cases where a properly trained nurse is not in attendance, and the patient is dependent on a neighbour
or friend to look after her, as is usual among poorer people, it is most important that the Physician should daily ascertain, and see for himself that his patient has been carefully washed and attended to. This is often neglected, and it is the doctor's blame if he is careless enough to allow such a thing to occur, if evil results follow.

Remarking on the difference in the amount of the lochia in different individuals Smellie (142) says, "the evacuation in some is very small, in others excessive; in one woman it ceases very soon, in another, it flows during the whole month, yet all of these "patients shall do well". He observes that the discharge ceases soonest in those who suckle their children. Hippocrates (143) advises some peculiar remedies when the discharge is insufficient, the uterus indurated, and the "patient afflicted with pains and fever, accompanied with horrors".

Cracked and sore nipples should seldom ever occur, and are the result, as a rule, of carelessness on the nurse's part, and inattention of the medical man, at least in the great majority of cases. As a remedy for this Lepage (144) has recommended Red iodide of mercury 2 grains, Spirit of Wine 1 ½ ounces to a pint of Glycerine and distilled water, frequently applied.

In no case should the patient be allowed to leave her
bed, even after the most normal labour, and puerperium, before the evening of the 10th. day, and if this rule were more carefully observed, much trouble and even danger would be saved to our patients. One hour on the evening of the 10th. day, followed by longer periods each evening and succeeding day, till the 18th. or so, should be enforced, and then the patient may safely be allowed to leave her room to sit in another, but she should not be allowed to go out of doors till a month has elapsed, unless under very exceptional conditions.

With regard to this point Lusk (145) observes "Not to leave the bed before the tenth day is a safe rule in normal puerperal convalescence". Garrigues (146) is convinced that "the upright and sitting postures ought to be carefully avoided until involution has proceeded so far that the uterus has receded from the anterior wall of the abdomen, and returned to the pelvic cavity", which in some would mean a week, in others two weeks or longer.

There can be no doubt as to the efficacy, when the discharge is becoming too free, of putting the child early to the breast, and I have noted in many cases, in my records, that application to the left breast is always more effective in causing uterine contraction than to the right.

Threatened mammary abscess is one of the most distressing
conditions that can befall the nursing mother. In a
great many cases, if seen early, and prompt and effective
action is taken, the actual formation of abscess can be averted. The means adopted is for the nurse to gently rub the skin over the painful swelling with oil, by means of the palm of her hand. This rubbing should be continued for 10 or 15 minutes, and repeated frequently during the day, and at night when the patient is awake. With patience and unremitting care, I am convinced that many a poor patient has been saved hours of agony and suffering, and even where the swelling is breaking down, and the adjacent skin is becoming red and inflamed, I have known the abscess disperse. If, in the first instance, when painful knotty hardness and swelling appears in the breast tissue, this rubbing were resorted to, doubtless mammary abscess would be a rare occurrence indeed.

When the case has advanced too far for hope of resolution in the above manner, no time should be lost in freely opening and thoroughly draining the abscess.

Sir A. Cooper (147) lays down this rule: "The surgeon should never wait for an abscess of the breast to approach the surface, but make an opening as soon as the slightest degree of fluctuation is perceptible; for if this be not done, and the abscess is not very superficial, the matter will spread, and form sinuses
"in different directions".

A plaster of glycerine and belladonna is often most effective in preventing mammary abscess in the early stages, by getting rid of the milk, and causing absorption of the fluids in the breast.

The question of under what circumstances a mother should, or should not, nurse her child, is an extremely important one, both for the sake of the mother and child. There can be no doubt that the tendency is becoming more and more strong, especially among mothers of the upper classes, to do away with their milk, and bring up their children by hand.

Probably it is more convenient for a Society lady, not to be hampered with a nursed child, but it is clearly the medical man's duty, in every case where he considers that nursing would be mutually beneficial, to use his strongest arguments in its favour. With the poorer classes on the other hand, it is different. They, believing rightly or wrongly that nursing ensures safety from conception, are inclined to go to the opposite extreme, and I have not infrequently found children, varying in age from 15 months to 2½ years, still coming to the breast. This of course is disgusting, and should be censured by the medical man. Probably in no case should nursing be continued after 9 months, and it should undoubtedly be discontinued sooner, if there is any
appearance of the health of the mother or child suffering in consequence. In cases where the mother has syphilis, phthisis or epilepsy, nursing should on no account be permitted. But given a healthy mother, and a child thriving on her milk, I always strongly recommend nursing for the first few months at least, until the child has made a good start, and the mother returned to her normal state. As soon, however, as it is evident that the child's strength is increasing at the expense of the mother's health and strength, nursing should be instantly stopped.

It would appear that in each succeeding generation mothers are becoming less and less capable of nursing their children, and entire absence of milk is not at all an uncommon occurrence, especially among mothers of the upper classes. It is a question if this is a sign of race degeneration, or the result of wilful suppression of natural milk in previous generations.

A curious idiosyncrasy in nursing has lately come under my notice. A mother, having three married daughters assures me that neither she or any of her daughters could nurse their children, although having an abundance of milk, in each case the children, instead of thriving, became rapidly ill, and to save their lives nursing had to be discontinued. I hope, shortly, to have an opportunity of examining chemically and microscopically the
milk of one of the daughters, and to trace the cause of the trouble.

For artificial feeding I have found nothing better than the milk from one cow, if it is certainly from one cow. Failing this, Nestles brand of Swiss Milk, with the addition of plenty of lime water is most useful, and children thrive well on it. If lime water in sufficient quantities were used with each bottle of milk, and if the bottles were of the right pattern, and kept scrupulously clean, we should have very little difficulty with sickness and diarrhoea in infants.

Regarding this Leishman (148) says, "The success of bottle feeding depends very greatly upon the care and experience of the mother or nurse, and upon nothing does the ultimate result hinge more, than upon strict attention to cleanliness".

Cheadle (149) emphasizes "the prime necessity for extreme cleanliness in all utensils used for infant's food, milk cans, bottles, cups, and also the wisdom of boiling milk as soon as it is received, so as to stop at once all further changes of fermentation. Milk once boiled remains longer free from sourness; it is practically sterilized. for the relief of acidity and flatulence, the result of fermentation in the intestines, I have found the following useful,"
B. Sed. Bicarb. \(\frac{1}{3}\) Sp. Spir. Ammon. Aromat. \(\frac{1}{3}\)
Sp. Chloroform, \(\frac{1}{3}\) Syrup \(\frac{1}{3}\) - Ag. Anethi \(\frac{3}{3}\),
for a child one month old.

No bottles with rubber tubes should be used, but those
simply with a teat attached to a glass screw cork, and
each bottle after being used, and carefully scalded out,
should be allowed, with the cork, to stand in cold
water, till required again. These points, together
with feeding the infant at regular intervals are most
important, and should be duly emphasized by the
physician.

A point frequently overlooked, but often of much impor-
tance is for the Physician to examine every male
infant to ascertain whether or not circumcision is
necessary, or even advisable.

Leishman (150) observes, "It is the duty of the accou-
ch-eur to examine the child after it's birth, and to
'enquire on his subsequent visits as to the various
'functions, in order that congenital malformations may
'not be overlooked".

If circumcision is necessary, it should be performed
during the first few weeks of the child's life. For
besides it's effect in preventing hernia, tendency to
convulsions, and other ills, it would seem that it is
advisable to circumcise the child before he is able to
understand what it means; and I have known a nervous
boy suffer much mental distress on discovering what
had been done to him.

Whiteleg has only once occurred among my patients, and
that was a patient suffering from puerperal fever,
complicated with septic pneumonia and pleurisy, due to
bad drainage and filthy surroundings. Removal to a
healthier condition in hospital was the only course open.
Probably some septic condition is the cause of most
cases of whiteleg, and besides local treatment, attention
to general surroundings is required.

Puerperal fever has fortunately been of exceedingly rare
occurrence in my practice; only three cases, and in each
there was undoubted proof of outside infection, from
writing on the prevention of puerperal fever
bad drainage etc. Smyly (151) warns us "against
frequent vaginal examinations, early rupture of the
membranes, unnecessary use of forceps, manual removal
of the placenta, and routine douching", as being
causes of this fever. He recommends that vaginal
should as far as possible be replaced by abdominal
examination and describes a method of the latter
which he recommends as being capable of giving us all
the information required, without the risk of intro-
ducing septic material per vaginam.

Ross (152) advises that the uterine cavity be thorough-
-ly cleansed with borated cotton, through a bivalve
speculum, afterwards daubing over the entire
endometrium with cotton dipped in iodized phenol.

Cold bathing is recommended by Mace (153) in his report of 74 Cases, the patient remaining in water a little over 150 degs. F. "until she shivers". He injects subcutaneously Caffeine or Sparteine before the bath. Professor A. R. Simpson (154) during a discussion on "micro-organisms in relation to puerperal fever" recommended corrosive sublimate as the best solution for douching in this fever, pointing out however that the employment of this substance is not entirely devoid of risk. He cited as an instance, the case of EDINBURGH a patient in the Maternity Hospital who, after rapidly improving under douching for three days, on the fourth had bloody stools, owing to the absorption of Mercury. He recommended as a means of avoiding this danger, that the uterus be douchèd with plain water, after the antiseptic has been applied.

Removal from the contaminating surroundings, together with frequent antiseptic douchings, and the administration of drugs, seem in most cases quite efficacious.

Of drugs, I have found Antipyrin, in small doses every few hours most useful, unless contraindicated, when quinine may be substituted. The importance of the notification of puerperal fever to the Authorities, and the proper disinfection of the house, clothes, etc.
that should follow, is well illustrated by the following case which lately came under my notice.

A patient, Mrs. S., was confined in December 1892, and attended by a medical man who had had the misfortune to lose several patients in succession from puerperal fever, immediately previously. Mrs. S., on the third day, contracted the fever, and ultimately died. Her husband married again a year later, and Mrs. S., number 2, a young primipara of 21, was confined in February 1895. This time the husband, fearing a repetition of his former loss, engaged another medical man to attend.

After a normal labour, Mrs. S. developed undoubted symptoms of puerperal fever, and being called in consultation, my colleague and I investigated the affair and found that although the previous case had been duly notified to the Authorities, no steps had been taken to disinfect the premises and clothes. Here undoubtedly, 26 months later, the second wife was infected with the same poison as the first, the germs having lurked all this time on the premises.

From this arises a practical question, Should Medical Men, who are attending cases of puerperal fever, be allowed for a time, to attend other cases of midwifery?

Sir J. Y. Simpson (155) in his article on "Communicability of Puerperal Fever" could not doubt that the "saturation of the bed clothes, etc. with the discharges
of a puerperal fever patient, might give the same
disease to another puerperal patient who was laid in
them'. He also mentions Moir's case (156) of fever
breaking out on board ship from this very cause.
From this arises a practical question; Should medical
men who are or have been attending recent cases of
puerperal fever, be allowed, for a time, to attend
other cases of Midwifery? 
In the above mentioned article Sir J. Y. Simpson draws
attention to this point, and cites the cases of a
certain Dr. Moir, (157) who had carried infection to
several of his patients, and of Dr. Hill of Leuchars;
the latter well illustrates the deadly effects of the
poison of erysipelas in puerperal women. Further as a
conclusive proof, he describes the incident of the
twelve midwives in Manchester, who, among them delivered
400 women, "Sixteen of these women died of puerperal
fever, all the others made good recoveries. The
sixteen fatal cases occurred in the practice of one
midwife, the disease being limited to her cases, the
other eleven midwives had no puerperal fever among
their patients.
Lusk (158) observes with reference to this important
point 'The first duty of the physician is to refrain
from attending a case of labour, when fresh from the
presence of contagious disease, or from contact with
septic materials, whether derived from the dissecting room, or the clinic. Scepticism regarding this source of danger is sure in the long run, to be severly punished.

Referring to the general treatment of patients in labour and during the puerperium, the closer one can follow Nature, and the less one interferes when things are progressing favourably, the better. It can scarcely, however, be argued that because Labour is a natural process, and the puerperium the natural result, that everything should be left to Nature entirely; and this is true especially in the management of the patient's dietary, and the administration of aperient medicine etc. in the puerperium. Among savage nations a doctor's attendance at a birth, and the patient's lying up during convalescence, are apparently unnecessary; but one of the results of civilization would seem to be the importance of the attendance of a medical man at the child birth, and during the stage of recovery, to assist in difficulties, and correct where Nature falls short.
PART SECOND.

A short analysis, and observations on interesting conditions which have been noted in the record of 500 cases.

In this section only conditions which have actually occurred during the attendance on 500 cases, will be noticed.

Placenta Praevia, Two cases

1. Central. At 6½ months.
2. Lateral. " 7 "

Both at times corresponding to menstrual periods, and in each case haemorrhage was severe, delivery being accomplished by turning; children of course dead.

Presentation.

Head 468 Cases.
Breech 19
Shoulder or arm. 2
Face. 1

Uncertain, owing to having no opportunity of examining, in the remaining cases.
In the cases of twins, in all the first child presented vertex, and the second presented breech.

In mentioning breech cases, in one instance a patient had borne 15 children, the first 9 were vertex presentations, in the last 6 the breech presented each time.

Post Partum Haemorrhage.

No case of true post partum haemorrhage, one case of rupture of cervical Artery.

Instrumental Labours.

78 Cases.

Mortality.

Death of Mother. No case.

Death of Foetus,

24 during labour.

8 in utero, and delivered in a macerated state, mostly premature.

12 died in delivery in pelvic presentations.

Twins,

11 times in 500 Cases.
Uterine Tumours,

Fibromata ascertained in 8 cases, causing difficulty in 3.

Displacement of Gravid Uterus,

Antversion. Two cases ascertained.
Retroversion. Six " "
Prolapse. Eleven " "

Deformed Pelvis.

A few cases suspected.

10. of Justominor.

In one case of flat pelvis the true conjugate measured 2.75 inches.

Hydramnios.

1 Case.

Uterine Inertia, and expulsion (vis a tergo).

4 Cases, one of them being a case of twins.

Precipitate Labours.

11 Cases
Sex of Child.

Male. 266.
Female. 234.

Of the Twins, 10 were males, 12 were Females.

In 3 cases both were males.
In 4 " " Females.
In 4 " one of each sex.

Size of Child.

Average weight at birth, (as far as could be ascertained, some people objecting to have the infants weighed), 6½ lbs.

Largest child. 11½ lbs.) at full time.
Smallest " 5½ lbs.)

Prolapse of Vaginal Walls.

2 Cases.

Turning.

6 Cases.

Secondary Haemorrhage.

1 Case, from septic condition, and filthy
condition of surroundings. Twelve days after delivery, a large clot, an exact cast of the Uterus was passed, after severe pain, followed by an alarming haemorrhage. Stopped by hot douching and Ergotin subcutaneously.

Puerperal Fever.

3 Cases.

Whiteleg.

1 Case.

Anaesthesia in labour.

Always Chloroform, and used, more or less in 128 cases.

Artificial Respiration in child.

In 51 Cases, for periods varying from a few minutes, to nearly an hour.

Caul.

2 Cases.

Cord Knotted. 1 Case.
Complication in Mother, during puerperium.

- Bronchitis, 41 Cases
- Pneumonia, (Septic) 1 *
- Cardiac Disease, 10 *
- Renal 2 *
- Rheumatism (Acute) 1 *
- Pleurisy (One Septic) 3 *
- Mental Excitement 2 *
- Convulsions (during delivery) 1 *

Duration of Labour.

- Average length of 1st. Stage 8½ hours.
- 2nd. Stage 2½ *
- 3rd. Stage 15 minutes.

Time of day.

- 9 p.m. to 6 a.m. 341 Cases.
- 6 a.m. 12 p.m. 69 *
- 12 p.m. 9 p.m. 90 *

Mammary Abscess.

- Threatened 12 Cases, 5 *

Pelvic Cellulitis.

- 2 cases.
Age of Mothers.          Primiparae.  Multiparas.
                      Youngest.  14yrs. 9mths.  19yrs. 3mths.
                      Eldest.  41.  42.

Ophthalmia Neonatorum.

One very severe case, in outdoor Maternity practice. A Midwife had attended the confinement, without apparently paying any attention to the child's eyes. Assistance was asked from the Maternity Hospital, and a student, with one of our nurses was sent. They reported a very serious condition of things, so the child was brought into hospital, and a nurse set aside to attend to it solely. The child was put under chloroform, and the eyes washed with a solution of nitrate of silver three times a day, but to no purpose, the sight having completely gone from both eyes. Gonorrhoea was the suspected cause, but owing to the hostility of the parents, the history could not be traced.
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