On Anaesthesia in Labour

by

David Moore

30th March 1854.
Anaesthetics are those agents which possess the power of diminishing sensibility and of relieving pain.

Of these the chief are Ether and Chloroform. For the introduction of the former into medical practice, the profession is indebted to Dr. Morton of Boston; and to Dr. Simpson of Edinburgh for the introduction of the latter, and also for the application of both to obstetric medicine.

Various preparations, however, were known to the Ancients also, capable of producing anaesthetic effects, and were applied by them for the relief of pain in surgery, and also to diminish the torture attendant on criminal punishment.

 Dioscorides mentions one, prepared by boiling down the roots of the Mandragora in wine, which was given, he says, to cause insensibility of those who were to be cut or cauterized.

Pliny, Apuleius, and Paré make similar mention of Mandragora.
Baptista Porta speaks of somniferous balls and potions, and Theodore of Hage of Tucca gives a receipt entitled "Spongia Somnifera," which consists of a watery extract of Opium, hyoscyamus, and other narcotic herbs contained in a sponge. When used the sponge is placed in warm water for an hour, and the vapour then being inhaled, it is alleged that the required effect may be produced.

To arrest the patient, a sponge dipped in vinegar is to be frequently applied to the nose, or the juice of fennegreed squirted into the nostrils.

Indian hemp (Cannabis indica) is, at the present day, given to criminals in India, before the execution of their sentence.

It constitutes the "Bang" of Morocco, when it is allowed for the purpose, among others of mitigating criminal suffering, and Sir J. Boucher mentions it as being used in the North of Africa, and also in the East.

The induction of anaesthesia in midwifery is not altogether of modern origin, for we find Theophrastus makes mention of it, with Plutarch, Bede, and others, and it is said...
that, the Welsh surgeons, as early as the sixth century, possessed the means of rendering delivery a painless operation.

In Scotland in the sixteenth century many witch-trials took place; the accusation being that the so-called witches were guilty of producing immunity from pain, during parturition, by various means.

On 30th September, 1846, Dr. Morton, a dentist of Boston, tried upon himself the inhalation of ether, with the view of testing its qualities as an anaesthetic. Having succeeded in rendering himself unconscious, and being satisfied with the result, he exhibited it immediately afterwards in the removal of teeth with such success, as encouraged him to seek and obtain permission to administer the drug during surgical operations in the Massachusetts General Hospital at Boston

Here it fully answered all his expectations: he now endeavoured to secure to himself the advantages likely to arise from the discovery, by taking out a patent for the exclusive right of administering ether; but Dr. Jackson,
a chemist of Boston, put forward a claim to the
discovery on the ground that, he had stated to
Morton that sulphuric ether would produce
each effect, when questioned by him on the
subject. Although this ground was by no
means a valid one, for the fact was stated in
all the wess on materia medica of the day,
yet, to dispose of an opponent who might
prove troublesome, Morton admitted him
to share in the patent.

Another claimant soon appeared in Dr.
Horace Wells, a dentist of Hartford, who in
1844, had had one of his own teeth painlessly
extracted during the inhalation of Nitrous
Oxide gas, who had extracted teeth from others
while rendered unconscious by the same means.
But having failed in its exhibition in the case
of a student before the medical college of
Boston, he incurred such ridicule that he
gave up the subject in despair.

To none of these however did any pecuniary
benefit result; for, the patent proving worthless,
Morton demanded a reward from Congress.
And although 100,000 dollars was proposed by
a member, yet the matter fell to the ground for want of requisite support.

In 1847, Bell published a pamphlet at Hartford, entitled "History of the Discovery of the Application of Nitrous Oxide Gas, Ether, and other Substances to Surgical Operations." From this we would infer, that he supposed the discovery of the peculiar properties of the first, his own, but to Sir H. Davy is due the merit of the first notice of nitrous oxide, viewed in this light; he having published, as early as 1800, his researches on that gas, in which he mentions the removal in his own person of headache, and of the pain of cutting a wisdom tooth by its inhalation, and also suggests its applicability to surgical operations in which there is no great loss of blood.

Dr. Pearson of Birmingham 1795 found the vapour of Sulphuric ether, simple or medicated, to be useful in Chronic Cataract, Hooping Cough, Pneumonia, Asthma (Spasmodic) &c. By Dr. Beddoes, about the same time, sulphuric ether was used in a similar manner, and by many others since.
On Morton's discovery becoming known, the use of ether in surgery spread rapidly over Europe, but its application to relieve the anguish of the parturient female was by none attempted, till Dr. Simpson first employed it, on January 19th 1847, in a patient with deformed pelvis, in whom it was determined to deliver by turning and extracting by the fet. This case was selected as in it, it was immaterial, whether the ether would put a stop to the uterine contractions or not. The result, according to Dr. Simpson, was most satisfying.

"It proved, that though the physical suffering of the parturient patient could be ameliorated by the employment of ether inhalation, yet the muscular contractions of the uterus were not interfered with; or in other words, that labour might go on in its course, although the sensations of pain usually attendant upon it were for the time being altogether abated."

Many other cases, equally favorable, in Edinburgh, followed so encouraging an
experiment, and similar results were very
soon after obtained in London, France,
Germany, America, & Ireland.

The use of Ether was now apparently
everywhere firmly established, but it was almost
immediately doomed to be supplanted by a more
worthy rival; for Dr. Simpson conceiving that
a substitute for it might be discovered which
would prove superior as an anaesthetic
had recourse to many experiments upon
himself chiefly, and upon others also, with
tarious substances similar in chemical
constitution to Ether and found that
"Chloroform," a dense, colourless, volatile liquid,
of agreeable odour & taste was far by far
the most advantageous.

Chloroform is preferable to Ether, chiefly
for the following reasons.

It is capable of producing, and that more
rapidly, as deep a state of anaesthesia when
exhibited in doses of only one third the quantity
required in ether; and at the same time the
first and excited stage of narcotic action
is by its use very much diminished.
or altogether annulled.

It is more pleasant and agreeable to the patient than ether, less irritating to the air passages, less apt to be followed by headache, other unpleasant consequences, its effects pass off more rapidly, and its odor is free from that adherence to the breath and garments which in ether is so objectionable.

It is a much more manageable agent, not requiring any special fluid of apparatus for its inhalation as ether does, the best and simplest being a pocket-handkerchief, or folded towel, or cloth placed in the hollow of a sponge, on which a little of the fluid is dropped. Chloroform is not inflammable.

In Boston, during an operation upon the face, under ether, considerable hemorrhage occurred, to stop which the actual cautery was applied. The ether vapours which was used took fire, and gave rise to a serious accident. (Read Oct. 24th, 1850.)

Chloroform, or light-brown of Tarnyle, C\(_2\)H\(_2\)Cl, was discovered by Sobeliiam in 1831.

By Dumas its composition was ascertained in 1835: "This Compound is
best obtained by distilling pure alcohol with water and bleaching powder. The product is well washed with water rectified, after being agitated for a short time with oil of vitriol, which removes traces of water and destroys certain oils which are usually present in small quantity (Eugynia show)

It is a pellucid liquid, of sweetish taste and fragrant odor, its density is 1.5, it boils at 141°, evaporates readily at ordinary temperatures, forming a vapour of great density, 4.2.

It is a neutral body, should have no acid reaction. Its impurities are oily substances, imparting a disagreeable odor, and containing chlorine, which cause headache when inhaled. Agitation with pure strong oil of vitriol renders these oils thus impure chloroform dark brown, showing the presence of these substances, at the same time removing them. If a few drops be allowed to evaporate on the hand, the odour of wood spirit or oily matter, if present, is at once apparent. Chloroform containing these impurities is unfit for use. Alcohol or ether may also be present, if so, there is a corresponding change.
in the density of the fluid. If sulphuric acid be present it may be detected by the addition of a solution of acid of baryta to water with which the Chloroform has been shaken.

Numerous objections have been urged against the employment of Anaesthesia, based, some upon Religious, some upon Moral, and others upon Medical grounds.

It is maintained by those who hold the first, that the words of the primeval curse are directly contravened by the use of Ether or Chloroform in Anæsthesia.

Now, there are various passages in the Bible which must induce us to believe, that the curse laid upon our first parents has, from God's conduct towards his own people, been withdrawn.

As (Deuteronomy vii. 13 v. 7, xxviii. 14 v.)

Again, if the words of the Curse are to be interpreted literally, as they affirm who press the argument, then the agriculturist who conducts his farming operations by means of brute labor, or by the assistance of Machinery, as a substitute for his own bodily exertion
Countering the strict interpretation as much has
does the obstetrician.

This question, however, more immediately
depends on the proper meaning of the word
"torment" as it occurs in the Curse.

It is considered as meaning mere
physical pain, by those opposing Anæsthesia
on religious grounds.

A uterine pain, as it is termed, consists
of a strong Muscular Contraction, in itself fa-
tiguing, and also of the acute sensations
of pain, to which such contraction gives rise.

Now, in the Curse, the Hebrew word
which is translated "torment" has reference
to the muscular exertion of child-birth,
and not to those intensely painful
feelings which usually accompany it.

For, it means bodily labour or toil,
being derived from another Hebrew word
designifying essentially "To Toil", and
whenever it occurs throughout the Bible
it still retains the meaning of simple toil.

But further, when the pain afflicts
only of the parturient female is referred to
in the Bible, two words, each separate and distinct from the above are used, and are never used in any other sense.

Hence, we must conclude that the so-called religious objections which have been advanced, are in their nature fallacious, and entirely without foundation.

Objections have also been brought forward of a moral nature.

Heges, in his "Treatise on Obstetrics," states that the exhibition of anaesthetics is an interference with a natural function, and an abrogation of one of the natural conditions. Achnare & Montgomery also hold similar opinions.

The functions of parturition and of progress in may be very fitly compared, they are both dependent on muscular contraction, although in each the end attained is different. It is unnatural to interfere with parturition, so also is it unnatural to interfere with progress; hence, we should not for our convenience use coaches, steamboats, railways &c., but always employ these members with
which nature has endowed us. By this argument, knives and forks are unnatural instruments; should civilized man use his fingers to tear his food, convey it to his mouth, as practised by our primitive forefathers, how then knives and forks were injuries unknown?

The habit of shaving also abrogates one of natural conditions. Disease and death are natural abnormities, yet no one would accuse the physician for relieving the one, or delaying as long as possible the other. Anaesthesia causes abrogation of consciousness, is objected by M. C. F. Ashwell. Every physician exhibits opium and other narcotics, with the intention of relieving pain, and of producing sleep. Is this procedure ever objected to?

Most persons lie abed longer than is at all necessary, thus abrogating their conscientious for a mere general indulgence. Herriman states, that Anaesthesia does not imitate nature. The whole parturient process it endure-
tend by nature herself. The use of
Anaesthetics does not interfere with
the mechanism, but rather tends to bring
it back to the natural standard, as
it were, of the savage state, in which
the pains of labour are slight or alto-
geher absent; (as is the case in some of
the back tribes) and from which
owing to the increased size of the
fetal head, the labour in civilized
nations has, gradually departed; it
is departing more and more as man
advances in the intellectual scale of
being.

Dr. Smith states that it excites Aphrodisia.
This has never occurred in Dr. Simpson's
experience, nor in that of any of the
Edinburgh obstetricians, and therefore
if it does occur, which is extremely
questionable, its rarity is such as
to nullify its effect upon the practice.
The same objection was advanced against
the introduction of coffee, and also of
potatoes. Yet who now believes it?
Allen states, that Anaesthecia is unnecessary as shown by the birth of vast Impriods.
But, this objection, if it is one, is equally applicable to Vaccination, to Railways
Coaches &c. Indeed all innovations.
Lastly, objections have been brought forward against Anaesthecia on
Medical grounds.
Cooper, duller affirm, that pain is a
state desirable and salutary, in surgery,
while Meigs V.P.o.M. and make similar
statements as regards Midwifery.
But, says Lavers, "It exhausts the prin-
ciple of life" - "It exhausts both the
system and the part" (Burns).
"True pain can destroy life." (Coch)
If pain is esultuating, then should its
duration increase the safety of the patient.
The following table, as least as far as
regards Midwifery will show, however,
that the longer the duration, the greater
the fatality of the pain.
Table from the statistics of Dr. Colman of Dublin.

<table>
<thead>
<tr>
<th>Duration of Labour</th>
<th>Proportion of Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>During 1st hour</td>
<td>1 in 322</td>
</tr>
<tr>
<td>2nd hour</td>
<td>1 in 319</td>
</tr>
<tr>
<td>3rd hour</td>
<td>1 in 166</td>
</tr>
<tr>
<td>4th to 12th</td>
<td>1 in 134</td>
</tr>
<tr>
<td>13th to 24th</td>
<td>1 in 80</td>
</tr>
<tr>
<td>25th to 36th</td>
<td>1 in 26</td>
</tr>
<tr>
<td>37th to 48th</td>
<td>1 in 17</td>
</tr>
<tr>
<td>49th to 60th</td>
<td>1 in 6</td>
</tr>
<tr>
<td>61st to 90th</td>
<td>1 in 5</td>
</tr>
</tbody>
</table>

It is as much the duty of the physician to prevent suffering as it is to prevent death, and all physicians exert their skill, in relieving pain, to the utmost, by operations when admissible. (Anesthesia)

Montgomery states that it is a cause of serious symptoms.

Periperal convulsions have been ascribed to its use. This effect has not followed its exhibition in Edinburgh, but on the contrary, it has been found to be the best medicinal agent for their relief.
and it is also given with advantage in a similar affection, tetanus.

The inhalation of ether, used to anaesthe-
tize surgical patients, was said to have
excited inflammation of the lungs, which
was found on examination after death.

Now, there can be no doubt that
pneumonia was discovered in many surgical
patients who had been operated upon when
under the influence of ether, but that the
inflammation of the lungs was the result of
this vapour by no means follows; For
statistical evidence clearly shows, that
pneumonic inflammation, the result of
surgical operations, was quite as frequent
before the introduction of ether as subsequently;
and also that those who have been sub-
mitted to operation die most commonly
not from any purely surgical effect, but
from the occurrence of some internal in-
flammation.

Gumlet appearances in 20 fatal cases of anes-
thetization under anaesthesia.
Influenza of Pulmonary organs = 30 = 23 in 100
- Intestinal organs = 9 = 4 in 100
- Pericardial Phlebitis = 38 = 29 in 100

Feverishness was said to have followed the administration of Chloroform at Boston and at St. Bartholomew's. But in Boston and also in St. Bartholomew's, for a time, a mixture of Chloroform and alcohol, called Chloric ether, was used, from this impure agent did the complication arise, as no feverishness follows the administration of the pure drug.

Purpuric fever has been ascribed to the induction of Anaesthesia. In Edinburgh, where Chloroform is most used, purpuric fever has declined considerably since its
introduction. Ramsebotham states that paralysis is a result of anaesthesia, and considers that the numbness, tingling of the extremities, or eye, which occurs during that state, is very likely to lead to paralysis.

Experience has shown, however, that such a result does not occur. Dr. R. mentions a case of Dr. Simpson's, in which, he says, paralysis of all the limbs resulted from the induction of anaesthesia during labour. But, the case stands thus: the lady in question, in consequence of a fright from a bull, was, when near her full time, prematurely delivered of a still-born child by turning (hand primamum). Plegmatism dolens supervened, and it was not till two months after delivery that any signs of paralysis became apparent.

Was this paralysis the result of Chloroform?

Dr. Green argues that anaesthesia was a cause of idiocy, for, he says, the pulsations of the child's heart are much accelerated, and is not this likely to produce effusion? But the pulsations
of the foetal heart are not accelerated, for chloroform does not at all affect the child's nerve passing through the placental circulation. Periperal Mania has also been attributed to Chloroform.

In Edinburgh, periperal mania has been found to be relieved by it; a lady in the city, had been five times confined in a lunatic asylum, on account of the mania supervening on her five prior labours; on her sixth pregnancy, chloroform was administered, with the result of entirely preventing a return of the insanity.

Drugs states, that Anaesthesia may prove suddenly fatal. Deaths from this cause have occurred in surgery, but in midwifery there is not one well-authenticated case, which is owing to the comparatively slight state of insensibility produced. "The danger attending its administration is a safeguard against its abuse, and probably prevents its use as an inciting agent. But even were the deaths occurring during its administration fairly referable to the drug..."
itself, an argument cannot be founded upon that circumstance against the use of Chloroform, for our very best drugs, have repeatedly produced death in medical practice. Since its introduction into Medicine some 50,000 doses have been given in Edinburgh, and with but one fatal case.

Now, there is no drug in the whole pharmacopoeia, even the simplest, which would prove so safe in full doses given in such an amount. Taylor, in his work on poisons, mentions cases of death having occurred from the mere drinking of cold water. Many of the deaths which have occurred during the anaesthetic state, resulted from fatal syncope, the case not being properly watched during administration, or persons liable to syncope; and not from asphyxia.

Green states that Anaesthesia interferes with the mechanism of labour.

On the contrary, labour is assisted by etherization. The action of the uterine is partly a reflex spinal and partly a reflex sympathetic act, now, Dr. M.
Hale has shown, that when the influence of the mind is withdrawn, reflex actions take place with much greater intensity. And so, it is found, that chloroform, but partially given, yet still sufficient to produce unconsciousness, increases the power of the uterine pain.

To every great innovation or established practice, threatening to overturn time-honoured usages, the same arguments and objections have been applied, which have, with such beguine vehemence, been urged against the adoption of Acetum of Paris, in his Pharmacologia, says that, "Devotion to authority, and established routine, has always been the means of opposing the progress of reason, the advancement of natural truths, and the prosecution of new discoveries."

When Jenner first introduced vaccination into England, it met with most violent opposition, and statement the most absurd and inconceivable, made regarding it: "Whether vaccination be agreeable to the
will and ordinances of God, is a question worthy of the consideration of the Contemptive & learned ministers of the Gospel of Jesus Christ? And whether it be impious & profane to work out of the hands of the Almighty the divine dispensations of providence?"

"In short, a great number of new Complaints, the diseases of beasts, filthy in their very nature and appearance in the face, eyes, ears with blindness, and deafness spreading their baneful influence over the whole body have been not unprofitable the consequence evidently of Cow-poxt inoculation, either originating from the grease in horses, or the natural diseases of Cows (Poxy or Cow-poxt inoculation)"

When Cinchona was first made known in London, its introducer, was bitterly persecuted by his professional brethren. Paris, on his introduction of the life-long a substitute for the actual Cantor received much ill-treatment from the Parisian College of Physicians, and particularly from Corromelin, the President. Nov
was the legitimate put in use for a hundred years after Paris's time.

That Chloroform has caused death in surgery, has been strongly affirmed as a valid reason against its use. But deaths occurred in surgery as frequently before Anaesthesia was applied, as before, but then they excited no notice. Now, when a fatal case occurs, it is quickly caught up as an argument against chloroform, and every death is laid to its charge.

Sir A. Cooper mentions a case of his own, when he opened with a lancet an abscess in the hand of a man, but before he could leave the room, the patient fell back expiring.

Sir B. Brodie has published a case in the London Medical Gazette 1843, in which the operation of lithotomy was performed, with but slight bleeding from the wound, when the patient died as soon as placed in bed.

Deaths have occurred even when patients have died on the operating table, before any instruments whatever were made use of.

Hundreds of Cases thus might be collected
in which occurred, when not a drop of Chloroform, or any similar agent was given; yet, in all these cases had Chloroform been given, the deaths would have been ascribed to its use, and to nothing else.

When Chloroform is inspired, there is usually perceived a noise in the ears, swimming before the eyes, and a numbness or thrilling felt all over the body. Sensation first disappears from the extremities, then from the trunk, and perception soon ceasing, the person falls into a state of insensibility. If the vapour be inhaled in large quantity it destroys life by causing paralysis of the heart, the Chambers of which will be found distended with black blood. If in smaller quantity and long continued it produces death apparently by its action on the brain, and by interfering with the function of respiration. In such cases the heart is found to beat after respiration has ceased. "When taken into the stomach in medicinal doses it is stimulant, sedative
Antispasmodic, Anaesthetic. In large doses it causes profound coma & death. Chloroform vapour, if inhaled upon the heart paralyses it immediately. (Owen's Med. Pneum.)

Could a part of the body be rendered insensible by the local action of Anaesthetics without inducing that state of unconsciousness necessary in its application to the lungs?

Celsus notes a report of a State of Local Anaesthesia being induced by the "Monophasic Stone" which being of a fatty nature, was bruised & spread over the part to be operated upon. In 1824, Dr. Moore endeavoured to produce by means of compression upon the nerves, insensibility to a limb, a state of insensibility in that limb. He tried it successfully on a patient, in whom John Hunter performed amputation below the knee, while under the compression the patient suffered no uneasiness from the operation. In 1848, Dr. Simpson read a paper before the Medico-Chirurgical Society of Edinburgh, in which he stated, that he had produced complete local Anaesthesia in some of the lower animals by the application of
various substances to individual parts.

Experiments were also made by Mr. Munnelly of Leeds with results similar to those of Dr. Simpson, but Dr. N. also stated succeeded, he assures, in almost completely rendering his own finger insensible by immersion of it in fluids, competent to produce such effect. By subjecting the human eye to the application of the vapour of Chloroform for about twenty minutes, he had rendered it almost insensible to the pain of a surgical operation. He also states that by the local application of Chloroform to a man's foot, he had rendered it insensible to the opening of an abscess.

Dr. Simpson, in order to test to what extent local anaesthesia could be induced, if it could be applied to Obstetric and surgical operations, performed a variety of experiments with different chemical bodies, and drew from the results the following conclusions: 1. In the human subject, partial, and perhaps superficial, local anaesthesia of a part, as the hand, can be produced by exposing it to the strong vapour
of Chloroform: but the resulting degree of this local anaesthesia is not sufficiently deep to allow the part to be cut or operated upon without pain.

2. "Any agent possessing a stronger local benumbing, or an anaesthetic influence, would probably be dangerous by its acting too powerfully on the general economy, before the local anaesthesia was established to a depth sufficient for operating."

3. Artificial local anaesthesia, from any known anaesthetic agents, seems objectionable in any part intended to be operated upon, in consequence of the vascular congestion injection which attends upon V accompanied this local anaesthesia.

4. There are few operations in which there is not previously a local benumbing, and the application of Chloroform, &c., touch the surface, would be far too painful to be endured, no small degree of suffering sometimes arising from the very exposure of the unbroken skin to their action.

Instruments have lately been devised
for the more perfect production of local anaesthesia by means of directing a current of vapour of chloroform with some force upon any part of the body. Professor Velatour of Paris, lately, in his clinical lecture, means of using one of these directed currents of chloroform vapour upon an abscess in the sole of the foot of a patient, in the French journals it was stated, that in five minutes he was enabled to make an incision into it without any signs of pain being felt.

On this report, Dr. Simpson used in the Edinburgh Infirmary, on a patient of Mr. Syme's, with an abscess in the foot, two such instruments as Mr. Velatour's, and each were powerful than his, and failed completely to render the incision free from pain.

From this, it would appear that Mr. Velatour's trial must have been unsuccessful; but the matter was set at rest by a letter received from Mr. Latour of Paris by Dr. Simpson, read by him to his class, stating that although Mr. Velatour's experi-
ment was favourably represented in the journals, still it proved a complete failure. Hence, we must conclude, that the projection of local anaesthesia in surgery, in the present state of our Knowledge, is for practical purposes, unattainable.

In midwifery can it be of service? The local action of Chloroform on the uterine, or on other mucous surfaces, is much too heating and irritating in its effects, to be applied with benefit; but Dr. Pereira, in his Materia Medica, quotes a case of a lady in whom Dr. Rossi, an Italian physician, completely removed, for the time, a uterine affection under which she laboured, by means of the local application of Carbonic acid gas to the uterus.

Different anaesthetic agents differ much in Chemical Constitution, their elementary composition affording no guide to their properties as such, as shown by the following table.
<table>
<thead>
<tr>
<th>Nitrous Oxide</th>
<th>Prof.</th>
<th>Prof.</th>
<th>Prof.</th>
<th>Prof.</th>
<th>Prof.</th>
<th>Prof.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphur Ether</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloroform</td>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzoar</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitric Ether</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcoholde</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dutch Liquid</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Succinphate of Carbon</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Does Chloroform confer any peculiar advantages on obstetrical practice?

Where it is desirable, and more particularly in fruit labours, to make a lengthened examination, it saves much mental and bodily distress to the patient, and gives much assistance to the physician.

What immense benefit does it not confer in such a case as happened by Mr. Miller, in his "Surgical Experience of Chloroform", where it becomes necessary, in a young and recently married female, to make the examination of the uterus by Speculum.

In precipitate presentations it affords
great facility in making a correct diagnosis, as the whole hand can be introduced into the vagina if necessary.

It elevates in a considerable degree the prospects of the mother; for many who previously looked forward to the agonizing throes of parturition with much anxiety, and consequent depression of spirits, are now rendered much more happy and cheerful by the certainty of a painless and easy delivery.

Chloroform does not, when given to the mother, produce any effect upon the child, for, it is found never to pass through the placental circulation.

What effect has Chloroform upon the uterus? If exhibited in but a partial degree, yet still sufficient to ensure the patient immunity from pain, it increases the force and power of the uterine contractions, and at the same cause softness and relaxation of the soft parts of the pelvis. If given in a greater degree, as deeply and is in surgical operations, it puts a stop to the uterine efforts completely.
Hence, by relaxing uthirs, causing dilatation of the soft parts, and by increasing the tension of the uterus itself, chloroform is of great service in normal labour.

Given deeply, so as to destroy the power of the uterus for the time, it confers great advantages in turning, instrumental delivery, etc. on the surgeon; and also relieves the patient from the depressing effects of those mental emotions, which would arise, were she in a state of consciousness.

Dose, given internally, five to ten minims, mixed with water and a little mucilage. It is sold in the shops under the name of Chloric Ether, made by adding one part chloroform to nine parts rectified spirit, dose of this is twenty to forty minims two or three times a day (Pereira’s Pharm. Medica).

If given in soda water it acts much more rapidly, probably by the conjunction of the carbonic acid.

Inhaled, in midwifery, it is done by generally three or four ounces are given
at the rate of an ounce an hour. Many cases have occurred in which patients have been kept under the influence of chloroform for days without any bad effects ensuing.

Heart affections are generally supposed to contra-indicate its use, but it has been exhibited in them without any evil results. However, it cannot in such cases be too carefully watched, lest the least approach to syncope should occur. It may be freely exhibited in Mania, Epilepsy, in head affections generally, in Chest affections. In Germany it is exhibited in pneumonia with good effect, an inhalation being had recourse to every hour or so. It may also be given in Hæmoptysis.

If syncope should follow its improper administration, it must be relieved by placing the patient in the recumbent position, inducing artificial respiration. The tongue should be pulled forwards, as it is apt to glide back-
Avoid obstruct the mouth of the patient. Air should be freely admitted into the chamber, and a current created by fanning. Cold water may be dashed on the face, chest, and ammonia applied to the nose. Some recommend that a supply of oxygen should be at hand to exhibit in case of need; but the apparatus connected with it, would be greatly in the way, and would tend to divert attention from more important means.

Galvanism also has been recommended to excite suspended respiration, but proofs wanting to show that it is capable of producing such an effect.

If the patient is very cold and pale, inversion may be resorted to.

Rules for the exhibition of Chloroform in Duration.

1. Begin it when the patient commences to complain of much pain, generally towards the end of the first stage.

2. Generally insulate perfect quietness around the patient, particularly when
First giving chloroform.

If the patient should talk when under chloroform, as she generally will if she hears others talking around her, place your hand upon her mouth, so as for a little to stop the sound, and then hearing no sound, she will remain quiet; or else place her a little more deeply under chloroform.

3. Only give it during a pain, and always withdraw it during the actual.

When exhibited as above, the patient generally sleeps till the next pain, if she do not, however, and more chloroform be required, swing her head into a hollow in the pillow, or the vapours remaining in this by its gravity will generally be sufficient for the purpose.

4. When given during the first stage, the anaesthesia need not be deep, except the suffering be great, or the symptoms of anaesthesia inadequate.

5. As the second stage progresses make the anaesthesia do complete
as to destroy all sensibility.
6. Do not allow the urinary bladder to be overdistended.

It is much better to use the catheter to empty the bladder, that to permit the patient to be awakened, as this short interval of pain is much complained of.

7. Do not restrain the patient to one position.
8. Be sure of to remove the chloroform as soon as the child is born.
9. Do not awake the patient artificially.

The eighth rule should be personally attended to, and not trusted to a nurse for there is a great liability to accident from neglect of removal of the rapoo.

It is much better, more agreeable to the patient, to allow her to awaken gradually, than to suddenly recall her to consciousness.

In conclusion then, it may be stated, that although many objections...
have been brought to bear upon cholera since its introduction; yet these will be removed in time, as people become more acquainted with the advantages arising from its use. No one would now think of urging the same objections against vaccination which were used in its introduction.

Besides, the female sex, conscious of the blessing conferred on them by its administration, and unprejudiced, will gradually force the use of it upon the profession.

And, there can be nothing, radically wrong in a practice, which but fulfills in a greater degree, those intentions entertained by all Medical men in the administration of other medicines, a practice so momentous in itself, as it is consistent with the principles of true humanity.