

No. 319

AN  
INAUGURAL DISSERTATION

ON  
*Chloroformization*  
*in*  
*Midwifery*

SUBMITTED TO THE  
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OF THE

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BY  
*Thomas A. Wright*

OF  
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## Chloroformization in Midwifery.

Few discoveries are to be found within the pages of medical history, that has caused so much discrepancy among writers and a no less confusion in this and other medical republics among practicing physicians. Professor Simpson of Edinburgh, was the first to test its anaesthetic virtues, and it appears from what writers say, that he had been convinced for some time that there existed a superior anaesthetic to sulphuric ether. In Nov, 1845 Professor Simpson, after experimenting with several anaesthetic agents, in order to discover a substitute for ether, tried chloroform by

inhalation, and having found its effects favorable, brought it forward, as a new remedy, for pain in Midwifery & Surgery. The advantages chloroform has over ether says Professor Miller of Edinburgh "is very obvious. The odour is much preferable; no inhaling machinery is required; there is little or no stimulation of the air passages; no cough in inspiring, no mucous secretions; no risk to the lungs; The effects are more speedy and thorough, the transition more satisfactory; The after effects are free from hazard, and almost from discomfort; The quantity employed is considerably less."

Much

depends upon the purity of the chloroform, Prof Eve says, "drop a few drops of chloroform into a tumbler of water, and if the chloroform sinks to the bottom in the form of shot, the article is apt to be pure." Professor Miller says, "the more pure the chloroform the more blund and speedy its influence. When impure - - irritations seems to be produced in the air passages; the patient coughs, and is unwilling to inspire the vapor; when becoming stupid, muscular excitement is apt to be troublesome, and tendency to talk may be very marked; after recovery the sickness, probably vomiting, and the nausea

is likely to prove of prolonged duration. Pure chloroform on the contrary does <sup>not</sup> irritate the air passages, and is much less liable to cause vomiting; the patient breathes it readily, sometimes greedily, enjoying its fragrance and sweetness very much, muscular excitement does not always occur, and when it does, proves both manageable and transient; the patient seldom speaks, or attempts to do so, before the stupor; this arrives speedily, and is of a less apoplectic look; emergence is calm; and all disagreeable consequences are of rare occurrence"

The proper mode

of administering chloroform has caused a display of the ingenuity, of some deep thinking medical philosophers, but now it is generally agreed, that we shall abolish the use of all machinery or mechanical contrivances, in the administration of chloroform, and use no apparatus save those of the most simple kind. "With an inhaler it is easy to suffocate the patient; without one, it is not very easy to avoid the admission of a considerable amount of atmospheric air, along with the vapors of chloroform— an amount quite sufficient to avert asphyxia." See Miller's Principles of Surgery. As to the apparatus, it may be very simple,

a common pocket handkerchief,  
a piece of lint, a towel or sponge  
or any thing that admits of  
the vapor of chloroform being  
brought in contact or proximity  
with the mouth and nostrils, and  
yet sufficiently porous to allow  
the free admixture of atmospheric  
air with its vapor.

The lint, sponge  
or handkerchief should be arran-  
ged in a conical shape, the concav-  
ity of which must be large enough  
to hold or cover the mouth and  
nose. This should be saturated with  
pure chloroform, in a quantity not  
yet determined, for high authorities  
disagree as to the amount to be  
inhaled. Prof. Simpson's rule is as

discreet as any, and he proceeds gently and cautiously, beginning with a small quantity, and increasing the dose until the wanted effects are obtained. Some surgeons commence with a drachm, others with less, but Prof Miller avers that he is governed more by the effects than by the quantity administered. Having the proper apparatus and pure chloroform, we should commence with a drachm more or less, being governed by the age, strength, or any previously ascertained idiosyncrasy or peculiarity of constitution. The inhaling apparatus should not come in direct contact with the patient's mouth and nose for the first two or three inhalations.



No one could think of doubting the expediency of the administrator being skillful and well acquainted with all the phenomena peculiar to chloroformization, for as Professor <sup>Briehman</sup> says, "nothing can be safer than to fear the proper administration of chloroform during the operation; or being ignorant of its effects, he might administer too large a dose, and produce fatal asphyxia, and the surgeon or operator, be held responsible for the ignorance of the administrator."

The inhalation of chloroform has, according to the best authorities, the following effects upon the system: The rapid production of

coma, relaxation of the muscles,  
slow and often stertorous breathing,  
and in some, upturning of the eyes,  
and total insensibility to "agents  
which ordinarily produce pain".

The heart is variably affected,  
owing to the existence or the nonexistence  
of disease of its structure. Foaming  
or frothing of the mouth sometimes  
takes place and is frequently  
convulsive movements of the  
muscles of the face and limbs.

Anaesthesia is usually produced  
in one or two minutes, though it  
may vary from ten seconds to five  
minutes; dependant entirely upon  
the susceptibility of the patient, and  
its effects continue about ten  
minutes. Dexterously and cautiously

administered we may keep the patient anaesthetized for several hours, or one or two days. The immediate effects of the agent are succeeded by drowsiness—sometimes by quiet sleep. Patients generally have no recollection of what has transpired during this state of insensibility, and after being apprized that they have had an operation performed upon them, display much incredulity. Others again preserve their consciousness and yet suffer no pain from the severest operations.

We ascertain that the patient is properly anaesthetized by pricking or pinching him and interrogating

him, and if he notices not, or answers  
incoherently, we are then satisfied  
that the agent has had its desired  
effect. I find it stated in The U.S.  
Dispensatory that the patient should  
be chloroformed to insensibility, but  
not to the abolition of consciousness  
-ep, and others again assert that  
sterorous breathing contraindicates  
its further administration.

Muscular excite-  
ment, Prof. Miller informs <sup>us</sup> does not  
prove that chloroform is unsuitable,  
but <sup>is</sup> an indication that more  
of the agent should be administered,  
though the same author has  
observed that this muscular  
excitement is more obstinate after  
the administration of impure

chloroform than when the pure article has been employed, and considers the amount of muscular excitement a test for the purity of the chloroform.

If the patient remains too long anaesthetized or falls into a state of syncope, we should not give him fluids, for fear they might gain admittance into the larynx and not pass down the esophagus. As restoratives fanning atmospheric air <sup>into</sup> the face, dragging out the tongue so as to facilitate breathing, the induction of artificial respiration by strongly compressing the walls of the thorax, the application of ammonia to the nostrils as also dashing cold water

upon the face and breast.

The anaesthetic effect of chloroform has been and is now a mooted point, and no doubt ultraism has been—practiced by the partizans of either side; the one paping exaggerated encomiums, the other [the opponents] are conscientious, prejudiced, and blind to the utility of the agent, and would hold one criminal if guilty of its administration.

I oppose the use of chloroform in normal cases of labour: 1<sup>st</sup> because I think nature competent to conduct the parturient through the dangers of parturition. 2<sup>nd</sup> I believe with

Prof. Meigs that "labour is the culminating point of the female somatic forces." 3<sup>rd</sup> The amount of time that the parturient is actually in pain as computed by Dr. Meigs, is too inconsiderable to justify such potent interference. 4<sup>th</sup> Being stereotyped in the opinion, that, to interfere or tamper with nature's physiological laws [and labour being undoubtedly one of those laws] is often a cause of disease and at any rate, not accelerating nature's physiological works. 5<sup>th</sup> Anaesthesia deprives the parturient of the auxiliary influences, brought about by the contraction of the abdominal muscles

and Dr Meigs asserts that "it lessens  
the force and frequency of the  
labour pains. Lastly it is —  
acknowledged by chloroform's stron-  
-gest advocates that unless great  
care be used, it will cause the  
instantaneous death of those  
who inhale it, and I am also  
convinced that chloroform has  
caused the instantaneous death,  
of patients, both in Midwifery  
& Surgery. Writers have opposed  
it in a moral point of view; this  
I think, a feigned or artificial  
modesty, and others no less absurd  
contend that it is ordained by  
God himself that women should  
have pain and trouble in labour.  
Although I give full credence



to the teachings of the Bible,  
yet I listen not to the arguments  
of such superstitious writers,  
who condemn the use of chloro-  
form and then are always found  
with their pockets full of  
morphine.

I should feel myself amenable  
to no ill conduct for using  
chloroform in distressing, lingering  
or harassing labours; the pains  
and suffering from which  
are extreme, for anaesthetics  
in such cases afford refreshing  
sleep and permit the powers  
of the system to recuperate with-  
out materially interfering with  
the labour

Chloroformization would be indicated

in all reverse positions of the head, where the occiput or vertex, instead of peeping out under the symphysis pubis glides over the whole sacro coccygeal curve and soft parts. This agent in such cases relaxes the parts, diminishes suffering, and hastens delivery.

In primiparous parturients the different stages having been tedious and long, it frequently occurs, when the head reaches the outlet, that the woman exhausted by previous suffering, is melancholy and despondent, and the perineum by its resistance threatens to protract the labour. Chloroform

under such circumstances would almost insure immediate relief

In forceps and all instrumental delivery; especially embryotomy. for chloroform prevents the mother from appreciating the terribleness of the operation performed upon her offspring

In all cases of turning, and more especially in those, where the waters have escaped for sometime, and the uterus firmly contracted upon the fetus, to such an extent as to prevent an operation being performed, until relaxation of the parts shall have taken place. Chloroform we are informed acts admirably in such cases, and renders futile venesection.

The opponents to chloroform  
think it contra-indicated in all  
hysterical convulsions, but I should  
employ it in cases where muscular  
excitability interfered with the  
progress of labour.

If the parturient  
failed to discharge the placenta  
after the delivery of her child, and  
much difficulty obtained in its  
extraction, I should give her  
chloroform.

Yrs  
Thomas A Wright

January 21<sup>st</sup> 1859