

AN
INAUGURAL DISSERTATION

ON

Anæsthetics

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BY

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Respectfully dedicated to
Paul H. Cox, Prof^l of Surgery in
the University of Nashville.
By the Author.

Anaesthetics

A single glance at the records of the past convinces us that no class of agents known to the medical profession, has elicited for a few years past more attention than the one under consideration. In whatever estimation anaesthetics have been held by the profession, there have not been wanting those who would degrade them from their proper position, as instruments of good to suffering humanity. Though its advocates ever true to their convictions have gallantly and nobly defended them as a sacred gift from God. Medical Philosophers more than a half century ago dreamed of these or similar agents. Dr. Rush conceived that future discoveries would give to the world

some agent endowed with all the properties that chloroform actually possesses; an agent that would assist nature in overcoming the agonizing pains attending surgical operations and childbearing.

Bergilius also speculated on this subject. He attempted to demonstrate the manner in which this great agent could be obtained, however his theory was not entirely correct, but sufficiently conclusive to impress us with the belief that had his life been prolonged a few years, his mature thoughts would have furnished the world with the great discovery.

Notwithstanding the views of these gigantic minds more than half a century ago, no such discovery was made until at comparatively a recent period.

A little more than ten years have elapsed since the introduction of anaesthetics into medicine and surgery, though a few months only were necessary to diffuse a knowledge of their powerful effects throughout the entire civilized world.

General effects of Anaesthetics. The first effect is stimulating; deafness, ringing in the ears, confusion, restlessness and numbness of the limbs ensue, then sleep more or less profound follows, consciousness is partially lost, and the sensibility blunted.

Next follows muscular relaxation, the patient becomes entirely unconscious of every thing around him, and insensible to pain. His breathing becomes stertorous and finally his respiration is interrupted, his pulse weak and fluttering, and if this stage is not arrested respiration will cease, and death follow.

Modus Operandi of Anæsthetics.— That they are absorbed is beyond doubt; they have been found in the blood in very many cases. Being then conveyed by the blood to the great nervous centres, these in succession lose their power. First, the cerebral lobes lose their power and intellect is impaired; then the cerebellum is affected and the power of regulating locomotion

is lost; afterwards the spinal mar-
row, and sensation and motion are
gone; lastly, the medulla oblongata,
the motive power of respiration, breat-
hing ceases, and death is the result,
The above are the views of Flourens, as
given by Becke.

Sulphuric Ether was the first used
to any considerable extent. Its prop-
erties were discovered in October
1846 by Dr. Morton Surgeon den-
tist of Boston, who after success-
fully using it in extracting teeth
and experimenting on himself, recom-
mended it to the profession of that
city. Several surgeons immediately
took it in to consideration and
experimented upon themselves then
in surgical operations, all of

Whom met with the most satisfac-
tory results. From this fore-life
it sprang as it were into full grown
manhood in a day. For some time
sulphuric Ether took entire possession
of the medical world, and continued
in favor with a few. It was sup-
posed to possess advantages over
any other anaesthetic. First its power
of stimulating was supposed to pro-
duce the double effect of stimulating
and bracing the system, while anaesthesia
was being produced. This last argu-
ment in its favor has degenerated
into an objection. The second ad-
vantage urged in its favor, is that
it is slow in its action, making
it a safe remedy. Few deaths have
been traced directly to the inhalation

of ether. One serious objection to it, is that it has a remarkably disagreeable odor, excites coughing, not infrequently severe headache. Although ether has been almost entirely abandoned, the following reported cases are conclusive evidence that it is an efficacious remedy. A case of mania was related by The Boston Medical and Surgical Journal, that was treated with ether inhalation. The patient was unmanageable and had to be held by assistants. Ether was administered, natural sleep came on in twenty-five minutes, from which he aroused, from and a half hours afterwards, perfectly rational. A similar case is reported

in the New York Annualist. The disease resisted for several days all the usual remedies, at length ether was given which quieted the patient in five minutes. After several successive applications he was entirely cured. The London Lancet reports several cases of mania chronic and acute, which were treated successfully with ether inhalation. The surgeon to a hospital at Tassin caused a patient laboring under traumatic tetanus to inhale the vapor of ether, the contractions were immediately overcome, the symptoms reappeared, and were again subdued. The London Lancet also reports a case of Traumatic tetanus by J C Lunsdown successfully -

treated with ether inhalation. He could
enumerate many other cases similar
to the above, but we think it unne-
-cessary.

We desire next to take up
Chloroform. This article was discovered
in the year 1831, by Guthrie of
New York, and about the same time by
Dobsonian of France and Liebig of
Germany. Chloroform is by far the
most powerful anaesthetic known
and rapidly manifests its influence.
Besides it seldom fails to produce
unconsciousness and insensibility.

That this article is daily gaining
favor as a therapeutic remedy, no
one will doubt, but ^{The} Profession is
not so blinded by its flattering
exterior as not to observe its occasional

ill effects. By their assiduity these they think to obviate. Like all other poisonous medicines this has occasionally produced fatal effects. These however bear a very small proportion to the number of cases in which it has been administered with good results. There appear to be important differences in the mode of administering chloroform, as adopted by different surgeons. But our limited reading convinces us that the proper and more safe plan is to be governed by the symptoms regardless of the quantity given.

It would be irrational to administer the same amount to every patient, seeing the greater susceptibility of some persons than others

to its influence. Chloroform should be given with a free admixture of air and continued until the breathing becomes stertorous. Plenty of air and plenty of chloroform, (Nashville Journal). It is of great importance that the tongue be closely observed during chloroformization. If respiration cease or become deficient, the tongue should be seized and pulled well forward. By thus doing the air is freely admitted to the lungs and respiration is resumed. The mode of administering chloroform is quite simple; no other apparatus is necessary than a napkin folded so as to form a hollow cone, into which pour the chloroform, then apply over the mouth and nose

not near enough to touch. The pressure The following reports will not be out of place. Surgeon Rigald of Paris relieved a little boy of painful phimosis by the use of chloroform. It was administered with the view of an operation but under its influence the bladder was enabled to throw off its contents, and thereby obviated the necessity of using the knife. Twenty-four hours afterwards the symptoms returned when chloroform relieved him again, without the necessity of an operation. A policeman swallowed strong mistake four grains of strychnine, Dr Bly being near at hand administered two large emetics in quick succession which failed to produce

emesis. The patient was convulsed, his jaws were locked, and his body drawn in the form of an arch; the approach of anything toward the mouth caused a recurrence of the spasms. At this stage chloroform was administered which relieved the spasms in a few minutes. A third emetic was then given which together with the constant use of chloroform produced vomiting. The stomach was thus cleared of the poison and the patient finally recovered. We have before us the reports of various authors and from different quarters of the globe showing the successful treatment of many of the diseases which the flesh is heir to, but we forbear to quote more of them,

save the statistics of one year.

The Shillings of London reported seventy-three cases of amputation of the thigh and leg under the influence of chloroform; fourteen died giving a mortality of nineteen per cent. Of one hundred and thirty-four without anaesthetics fifty-five died, being a mortality of forty-one per cent. In the French hospital two hundred eleven cases, show a diminished mortality. Dr Bennett of Massachusetts used chloroform in ten hundred cases of labor without an unpleasant symptom. In the Massachusetts general hospital one hundred fifty-four, New York hospital

Thirty seven, Clinic of the University
of Pennsylvania, Thirteen, Clinic
of the Jefferson College forty five,
Cincinnati Hospital six ten, operations
where ether or chloroform was em-
-ployed and without a single
death.

Besides the anaesthetics al-
-ready mentioned several others
are in use, though they are of
minor importance, and scarce worthy
a passing notice. Chloric ether
has been used as an anaesthetic.
It is simply the dilution of
chloroform with alcohol. This
agent is but little used at the
present time.

Cold appears to be
a more available remedy

than the latter, Ice pounded up
with equal proportions of Salt
constitutes a very good Ana-
-esthetic for minor operations.

From the world of exi-
-dence around us we can but be
favorably impressed with Anæsthesia.
We have been taught by our worthy
Professor of Surgery to almost re-
-sence them. His confidence in them
as a means of overcoming the se-
-vere pain attending operations are
unbounded. Though he has never
failed to admonish his classes
that while they were useful and
safe when not abused, they are
nevertheless fraught with evil
consequences, and should be used
with care and discrimination.