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Thesis
on
Phlebotomy
by
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MB. ChB. Edin.

Coldestane
26th April 1886.
Thesis on Phlebotomy.

As a Country Practitioner, I have decided to write upon blood-letting, as the subject of my thesis. Had I had more time at my disposal, or more opportunities of research, my intention was to write out the subject more fully, along with more details on blood-pressure, but as these are not easily obtainable in country villages, I have decided to write as fully as time will allow, my experiences of blood-letting, including some cases which have been shown me by a friend.

Before entering more fully into the modern method of procedure, I intend giving a short account of the history of Phlebotomy. The word itself is derived...
from two Greek words, Philo, a friend, and vomiai, to cut, and means the letting of blood from a vein.

Any large vein may be chosen in the hand, arm, foot, leg, neck, or tongue, but usually the median basilic or the median cephalic are the veins taken. The choice of the two depends on the size of these two veins. Bleeding from the arteries was very rarely made use of, though the temporal artery used to be cut for head affections.

About four centuries before Christ, Hippocrates wrote on the subject, but his views were rather against than for it, as he preferred natural cure rather than weakening her efforts by bleeding.

His followers made more use of the lanceet, and went
to the other extreme, in Bleed-
ing to excess.

We again find that in two
hundred years, they returned
more to the views of Hippocrates,
and endeavoured to clarify
cases as they were amenable
to treatment by Inunction.

Socrates again
brought bleeding into notice,
as he concluded that the
cause of disease was due
to the abundance of blood,
therefore bleed to relieve the
system when disease showed
itself. Celsus following
him, wrote upon the cases
in which bleeding was of
use. Artemus & Galen
were also great believers in
Inunction, and advocated
large bleedings in disease
both acute & chronic. From
here the practice became
very general and remain.
ed to, for many centuries, Helmont was one who wrote against the use of bleeding, as he contended that it weakened the vital forces.

Arthus' great discovery in 1642 of the circulation of the blood caused a great revolution in the medical profession, and made a great change in this particular practice, the discovery placing it on a more scientific basis.

Dr. Thomas Sydenham, 1673 was a great follower of Galen, and supported the practice in from for the following reasons:

"To prevent also great insecurity of the circulation from whence dangerous symptoms arise, if need be, to build a quicker motion if it moves too sluggishly."
that nature might not be frustrated in her design of
introducing the cross.

Stahl was more moderate in his views, and believed that
scurvy of blood was not a disease, but in cases of
inflammation bleeding was of use to relieve the
symptom of the circulation.

Dr. Samuel Cooper says in his Practice of Surgery, that
bleeding is quite improper when the inflammation and
fever are trivial; when the patient is very feeble or very
aged, and when the cause of the affection can be
safely removed. The efficacy of bleeding is greater the sooner
it is practiced, and the more suddenly the blood is evacuated.

Bleeding near the part
affected is usually more
effective, than in a remote
situation.

In the Morita Praecepta Medicorum of Dr. Mead, published in 1750, we are told that blood-letting is a most excellent remedy in the beginning of all fevers, and that any severe local pain, a difficulty in breathing, or delirium warrant blood-letting, even in the height of fever, and all the more in the beginning.

Dr. Cullen used blood-letting to moderate the violence of motion in fevers, and employed it as far as the symptoms of the disease required, and the circulations of the patient could bear, as too much would retard recovery, increase the dilatity, render more liable to re-epidemic or bring on other disease.

Dr. Gregory says in Blood-
lattics. "Attention must always be
paid to the constitution of
the patient, and it must be
borne in mind that practice is
highly improper in persons of
corpulent habit, firm muscles,
and florid complexion would
probably be detrimental in
emaciated subjects, with flaccid
muscles, cold extremities, and
a small thready pulse."

In the year 1878, W. School
and E. Milgrom claimed to
have cured many cases of
hydrophobia.

The practice became so general
that, until this century, very
few dared to make any re-
marks, upon its use as being
instrumental, in causing
harm to the suffering com-

Medical men were in fact
not the only men, who
preached this form of
treatment, as many among
the Ecclesiastical orders used
it as a remedy for evil
desires.
In astrology, these operations
were only performed under
right celestial signs, other
wise the operation was con-
sidered ineffective.
In our country (Brabant)
many doctors in this century
bled all their patients
regularly, whether they were
ill or not, and I have no
doubt but that they thus ex-
pected that by so doing they
would cure some disorder
improve the mind, strengthen
the memory, and create
a healthy abatement to those
operated on.
A practitioner has informed
me that in the year 1848,
bleeding was still had
 recourse to in the first
Majority of cases of illness and accident, when there was any complaint of pain, accompanied by a quick pulse and especially so if there was any headache.

In all cases of Pneumonia, fever and Inflammation, bleeding was always had recourse to by the older practitioners of this county, and if not successful in relieving by the first operation it was repeated. XVI to XX oz. of blood being the usual quantity extracted, at a sitting, though of course more would often be taken at one bleeding.

Repeated bleedings were performed, whenever any pain reappeared, or the breathing became more difficult.
The same Doctor also informed me, that he had seen a woman bleed to death, by a midwife, as one of the elder practitioners had recommended her to bleed until the patient fainted; but unfortunately in this case the Frock was kept in the recumbent position and therefore never fainted, but slowly and gradually ceased to live as the blood poured from her vein, which as my friend says "was standing in midbasins all over the room"; hence the worse pointed to, in triumph, suggesting that the person had at least been perfectly dead. Bleeding must certainly have been very common in deed, at one time, as a story is told of a Doctor...
who lived in this town about thirty years ago.
He had a patient suffering from pneumonia some miles distant, whom he had bled during the day and on being informed at night that the patient was still suffering, sent a message that they were to unloose the bandage and take as much blood as he had done that same day.
In Dr. James Russells [late minister of Yarrow] Reminiscences of Yarrow we find at page 118 a paragraph on unprofessional doctors relating to Vaccination & Phlebotomy.
As regards the latter he says as follows: "It was long believed that phlebotomy twice a year was conducive to health; and in spring and autumn, Dr. Ballantyne, Dykeops, came an hour earlier to church..."
With his lanceet. Other great
kneaders afterwards were fee.
Robert How, Harwood Fees, and
Mr. Morton, from Elthick
Brigand, who continued
the practice even after their
hands had for shaking
Pugh's part from Mr. Morton
his lanceet when he last
left for Africa, and he
presented it to the Rev. John
Gibson, who became Minister
of Kirkhope.
In this country, it was the
custom for everyone to be
bled once or twice a year,
and more than one person
has shown me the marks
made by the old medical
men while they were on their
annual Fetterfarnem Munds.
The principles on
which blood-letting was
practiced were certainly
erroneous, as the Medical
proposition was considered that by bleeding, they were taking the "Matrice Morti" from the body, lessening the flow of blood to the inflamed parts, as well as the released quantity in the part, and that the pulse was the proper indicator of the amount to be drawn.

The "Matrice Morti" in the blood was thrown into a state of fermentation and bleeding greatly lessened this.

If the "Matrice Morti" were not thrown readily off, then they caused some internal inflammation, and thus their error is in looking upon that fluid as the diseased part of the body and not the part affected. In
practising blood-letting they described the flow of blood to the inflamed organ, which of course was contrary to the natural hairs formation of the exudations in the parts into cells, for the subsequent elimination by evaporation or by absorption as in all inflamed organs whatever the cause of the inflammation may be, are restored to health by a free supply, and retarded by a diminished supply of blood.

By lessening the quantity of blood in a part they were certainly acting under a wrong impression, as by so doing they retarded the healing up of the exudation, which on the contrary required an increased flow to it.
able the weakened organ to recover itself.

When taking the pulse as a guide to bleeding, they were also wrong as for the reason just given. They diminished to too great a degree the blood and weakened the system and rendered the recovery much slower from want of action.

In 1857-8 some authorities such as Sir. Alison in Robert Chrichton and others contended, that the pulse and type of organ disease had changed, and that persons who years ago would have been quite able to withstand being bled were, now no longer able to undergo such treatment as the type of inflammation.
had changed.

There is no doubt, that as diagnosis became more perfect, and an acquaintance was made with pathology more general, it was found that in many cases by reference and statistics, pus formation was unnecessary, and often detrimental.

It is my opinion that there is no change of the inflammatory or organic disease whatever, and as Dr. Dunciun has very aptly put it, "such changes exist only in the imaginations of physicians."

I believe that the criminal bleeding of the old doctors, brought a great therapeutic remedy into disrepute, for such is pus formation, when performed in properly selected...
get cases. If Watson's great
practitioners ... that we should
do bleed as to secure the
advantages of the remedy
and avoid its disadvantages."

Dr. J. Hughes, Russell says
"the real tests of successful
practice are not to be
sought for in the relief
of symptoms, but in the
removal of disease and
that that treatment will
be the best, which Caesarei
Sanitus, is followed by
fewest deaths and
leads to recovery in
the shortest time."

Blood letting I con-
tend does not only
restore but by lessening
the pain, the wear and
tear of the heart, lung and
other organs renders the
body much more,
Capable of coping with the disease either in lung, brain, or kidney. As a matter of course such an operation cannot take from a lung the secretions that it promotes, the secretions of the body, which have been at a standstill and that means hurried on the elimination of that liquidation either by absorption or by ejection. In performing incision I do not do so only for a palliative measure, but with the view of economizing my patient's strength for a further struggle against the malady he is inflicted with. It is my opinion.
that if practised early enough, the pouring out of exudation in the lungs may be materially checked, by lowering the blood pressure, as it seems to me that an excited circulation would tend to increase the lung exudation and at least would certainly not mend matters. 

Dr. Dodd of London wrote the following: "Internal inflammations are cured not by the opiate administered, nor by the opiate promoted by drugs of the phlegmatic, but by a natural process, as distinct and definite as that process itself. of abnormal nutritions to which we give the
Name of Inflammation. What we may do by our interference may either aid, promote, and even accelerate, this natural tendency to get well, or it may very seriously impair and retard, and even altogether stop that salutary process. Inflammation as the waste is very much increased, the removing the exudation, such as lymph and pus the supply must of necessity increase as well. This will be promoted and even accelerated, and not seriously impaired or retarded and certainly not altogether stopped by relieving the heart and...
motting all excretions in the glands of the body and also the secretion of offert products by abstracting a few ounces of blood from a vein, and following the disease which has by that method of treatment lost a great deal of its severity with good good such as milk and various cures diet with medicines of a stimulating nature.

The value of blood letting was very much overrated, and therefore too indiscriminately used, and by that means did more harm than good.

Gradually it fell into disuse and is now seldom or ever used except by a...
very few Physicians as a
therapeutic agent.

Though our Forefathers bled
too much and often caused
bad harrow to their patients,
there is no reason that
we should, on the other hand,
bleed too seldom, or give up
the practice altogether for in
many instances the judicious
abstraction of blood relieves
the patient and promotes
his recovery, when such a
favourable result is not
obtainable by other means
at hand, and certainly
in many diseases a fatal
termination is avoided.

A correct diagnosis is
essential to the proper use
and application of the
practice, if the result brought
about is to be a successful
one. Hence we keep
purification as a practice
Not to be condemned, but one which the Physician should be always ready to apply to a serious case coming under his notice, keeping what is useful in our daily work and avoiding what was harmful in the days of our ancestors when diagnosis and pathology were imperfect, and when blood-letting was in vogue for every disease, not only in private practice but in hospitals, where we would expect the best procedure for the patient to be laid down, and expounded to students and others.

A small bleeding which must be regulated by the operator is in many instances sufficient to avoid a fatal termin-
ation and modify the
disease so much that
Recovery is hastened, not
as we are taught now,
that bleeding retards
Recovery and promotes
the appearance of interem-
ent complications.

I can understand how
Persianation has fallen into
Disuse were we to do
as our forefathers did and
abstract great quantities
of blood not only at the
commencement of an ill-
ness, but during the pro-
gress toward recovery.

On the contrary, as much
blood should be taken from
the arm or leg, as the case
may be, so as to relieve
the excited and engorged
heart, disturbed nervous
system, and fearful head-
ache of acute inflammation.
not going beyond those indi-
cations to stop the abstraction of blood and follow up the treatment by what may seem best for the patient.

Circumstances often occur where the disease takes on a form from the means employed at first, and where the symptoms are de-
ciduous from the judicious or injudicious means adopted at the beginning.

These facts applicable to Pneumonia may be believed without reservation and I am convinced that a powerful impression is pro-
duced upon an inflamed lung by the abstraction of a quantity of blood in the early stage.

Many cases I do not doubt might be cured from a Pneumonia
to a simple Catarrh, is not changed in character.
Certainly much modified and made more amenable
to treatment. If bleeding is not resorted to the opposite
effect is probably induced. The disease becomes violent
and intractable, the organ
harassd by drugs and
the recuperative power is
broken down and conv-
valence rendered more
protracted.
This idea of protracted convalescence has been
the means of restraining
the use of the lancet, in the
early stages, and when
it can do most, if not
the only real good.
It has been thrown aside
to give place to the minor
advantages which are to
be derived from perspiration.
And other remedies.

This delirium has been much overrated, and in
the number of instances where I have bled patients,
and seen others bleed, I have never yet seen it.

Of course I cannot commend a practitioner who
orders repeated bleedings; for habit is similar to the
mechanical practice of writing prescriptions.

I am certain there is no
usefulness in it and is
against the views of profes-
sional science.

A doctor can make the
practice of bleeding useless
or useful, efficacious or mere
and void.

We may ask what are
the means to determine the
quantity to be extracted? I
answer the sensation on
or mitigation of the most
urgent symptoms and
the quelling of the pulse.
Nothing to my mind
has brought bleeding with
such dispense as the following
written order upon voc.


Vires tejic e 666.

The operation was generally
put into the hands of an
assistant or other incarcerated
person who contents himself
as it were duty to draw of
the prescribed quantity without
any regard to the symptoms
pulse or effect produced.

The above conclusions
have been drawn from cases
which have come under
my notice.

I proceed as I proceed
with my papers. The course
Ruling & termination of Viral
Cases and I shall endeavour
to show by those that fine-
Ostium is of immense value in the early stage of Paralysis, in Influenza, Sanguineous Apoplexy, Convulsions, Epilepsy, and Bronchitis; also as W. Hughes Burnett remarks, "Where there is an obstruction to the circulation in the heart and lungs dependent upon the overdistention of the Right side of the former organ or in serious engagement and obstruction of the latter, in Apoplexy and in Ateurism he has been most frequently relied upon by bleeding to the extent of a few ounces of blood."
The first case which I use to illustrate what I have advocated is that of J. S. residing at some distance from Coldstream, aged 18 years. I found my patient in great agony with a temperature of 104° and pulse over a hundred and thirty. Being at some distance from a chemist I was obliged to relieve him by the means which I had at hand. By means of my lancet I extracted over twelve ounces of blood which was followed by immediate relief. recovery took place, from that moment and within nine days he was perfectly well and almost able to resume his duties on the farm.
J. S. residing at Cornhiek
had been working upon the Railway, and was exposed to some weather resulting in pneumonia of both sides with fever. He was very restless and in a state of delirium. When I saw him, his temperature was above 103° and pulse about 140 beats per minute.

He had great pain in his right side and great difficulty in breathing. I removed from his arm about 15 ounces of blood, which entirely relieved the pain and cleared his head so much that before the bleeding was stopped he exclaimed, "What relief!" His subsequent progress was very good indeed, the temperature and pulse falling to normal upon the fifth day.
Within a week he was at his work again perfectly well. This case is peculiarly interesting as the same patient had the same symptoms not years ago and was treated by myself for inflammation of the lungs. It was after much difficulty that I had my patient in a condition to work at the end of six weeks.

Another case of the same disease, when I was attending mine employed on the Aberdeen and Comrie Railway,
W. R. aged 24 years, was taken ill upon the Monday with all the symptoms of Double Pneumonia, suffering a great deal of pain, with difficulty of breathing and pleurisy. He was a great drinker.
And Total Nervous and his symptoms were most acute and aggravated by his mode of living, in a crowded bar. I determined to attack the disease at once by injection and atonel and about twenty ounces of blood. He was at once relieved from all urgent symptoms and the case terminated successfully within a fortnight as the after-treatment was greatly hampered by the unhealthy atmosphere which constantly surrounded him.

As I have never had the opportunity of judging the effects of injections in human subjects I am obliged to have recourse to the experience of Dr. Whitehead Greenough who has kindly given me a
few facts regarding cases which have come under my notice.
He states that the first case, which drew his attention to the value of this treat, must have occurred as far back as the Spring of 1866.
About 3 P.M. I was con
ducted by a man 36 years of age, strong and appar
tent in good health, who had just arrived by the Liverpool steamer in Greenock.
He fell very unwell complaining of headache and general malaise.
He stated that he felt no pain whatever only a feeling of great oppression.
He had hardly passed any urine since the previous day, but I got him with difficulty to pass about one wineglassful.
I found the specimen loaded
with casts and blood dyes
and depositing a great quan-
tity of albumen on settling
and with nitric acid.
I advised him to go home
immediately and send for
his doctor and let him
know by means of a note
which I have that he was
suffering from acute dyspe-
psia. He lived beyond
Elgower, in the neighbour-
hood of Bothwell.

About three hours after
Windsor I was called, in haste,
to a hotel in the town
where I found the same man
apparently in the same
state. He was labouring and
rattling, with lips, clamping
throat over the face and
chest, pulse small and
quick, heart action tumult-
uous and the corners
almost drowned by the brine moist respiration rales.
He was conscious but unable to speak. As his
whole appearance indicated extreme difficulty in breath-
ing and according the state the
midways it occurred to me
that he might be relieved
by bleeding; accordingly
I opened the left median fascia
and drew off not
less than sixty ounces of
blood.
In a few minutes the
patient was able to speak
erenewed the relief
he felt by saying "Man
that is like taking a thing
off my throat!"
The beneficial result was
further shown by a copious
flow of urine. The same
night and by the gradual
dissipation and final
Disappearance of all trace of albumen in about a fortnight.

Dr. Whitford mentioned his interesting case to Professor Drummell and said that he was satisfied, by his own observation and experience, that blood-letting in acute nephritis should be regarded as of great benefit. Since then Dr. Whitford has always had recourse to blood-letting in acute idiopathic nephritis and frequently in the catarhal form resulting from scarlatina.

During the last year Dr. Whitford has had three patients with undoubted benefit. The first in a child aged six years with persistent dyspnoea and blood-cells as well as albumen in the urine.
The ailment had existed for about a month and the little patient was much reduced in strength.

Blood to the amount of nine ounces was removed and the Albumen entirely disappeared within three weeks.

The second case occurred in a lad of about 20 years of age, in whom the disease had lasted about three weeks. He suffered from severe headache and increased blood pressure in all the limbs.

Fifty-five ounces were taken from the arm, with immediate relief from the headache and speedy disappearance of the Albumen.

The third case was that of a woman aged 56 years where the Albumen
had lasted for five weeks, and she showed all the symptoms of the disease becoming chronic. She was tried to the extent of thirty-six ounces with the result that the albumen entirely disappeared in ten days.

In all the cases of Dr. Whiteford it was particularly noted that the specific gravity of the urine had not fallen much below the normal, but was at times up to the natural standard.

The conclusions which I have drawn from these cases and from my own observations on the specific gravity of urine are that it may be a good guide as to whether or not the time for bleeding has passed away.
If the Specific Gravity be much below the normal standard, and it may be considered as proof that degeneration of the structure has taken place and that consequently the disease has passed into another stage.

I believe further that a high Specific Gravity of the urine would enable one to judge of the utility of blood letting in other acute parenchymatous inflammations such as Rheumatism, Pneumonia, Peritonitis, Meningitis, etc. In the congestive form of Nephritis which occurs in Pregnancy and before Labour comes on I believe true. Oedema should always be regarded as the remedy.

If labour be terminated before the condition of the
Kidney has been noticed, there is no absolute necessity for a sudden lowering of the blood-pressure, as the Coeliac Arterial Branches that about-

In any case I believe Vincenzo would prevent a fatal termination in more complicated cases, by insuring immediate lowering of the blood-pressure instead of the more gradual and un-

This interesting condition of matters leads me to con-

The subject of Pupilinal Con-

I have cases to show where blood bleeding was of immense value in cutting short the very violent symptoms and changing the patient's condition from imminent-
daughter to one of rest and comfort.

When in practice in South Northumberland as an assistant I was called to attend Mrs. C. at Snakes Home. Found my patient My Academie, with swollen ankles and puffiness of the eyes. Labour had advanced to the second stage when without a moment's warning she was convicted the labour pains ceased.

Chloroform was administered and labour terminated by instruments. The convulsions continued at times and as chloroform was not efficient in entirely removing them, about twenty ounces of blood were removed with the result that immediately all the fit ceased and the
patient though somewhat anaemic gradually recovered her former good health.

About two years ago I was summoned to attend Mr. W. Shepherd’s wife residing at Middridge about eight miles from Coldstream. I found her in a state of convulsion, with labour far advanced, the head occupying the outlet of the pelvis. Incurably chloroformed and abstracted the child. She was afterwards in perfect comfort and quite conscious knowing from her appearance that she was suffering from a complication. I did not know at what moment the fit might again return. I waited in the district about three hours and returned, at the end of
That time, with instructions to send immediately for me and to use chloroform greedily if the fits recurred. Had not been home long, when a messenger arrived saying that her health was worse. I went out and found her condition as desperate as ever except only the fits were almost continuous. I fed freely from the arm, with decided benefit, as the convulsions ceased. The respirations and heart beats became tranquil; but I still remained the whole day and night.

She died in thirty hours after the child was born in peace and perfect conscious.

As I was not aware of her condition before labour
that was no time to notify the state of the kidneys, which was shown by the tremendous quantity of albumen in the urine.

I have brought this case into my thesis as an illustration of a state which several practitioners are frequently called upon to treat, and one in which we must act quickly, and do what is best for the patient, under the most unfavourable circumstances.

I am convinced that a fatal termination was inevitable after the reoccurrence of the convulsions, which was brought on by the failure of the kidneys to eliminate the aera from the blood and tissues.

I do not consider that this case shows the failure of blood-letting in renal
convulsions because, before labour had commenced, poisoning of the patient had already begun, and could not be counteracted by any endeavour on the part of the practitioner.

About ten months ago I was called to see E.C., a young woman aged twenty-four years. She was sitting up in bed and could scarcely speak on account of great dyspnoea and debility. She had been in this condition for several days and I found on examination her heart's action weak and tremulous, the sounds muffled by loud bronchial rales, her lips livid, and general anaemia. She had not passed urine for one or two days, and had all the appearances...
Of some congestion of the kidneys, and oedema of the lungs.
She was then eight-and-a-half months pregnant.
It was decided whether or not she should bring on premature labour or abstract a quantity of blood. I adopted the latter mode of treatment and was very pleased to find all the expect symptoms begin to subside. She improved visibly very much relieved and no longer showed any pain about a pint of water, a specimen of which I examined, and found a large quantity of albumen, with cases and blood clots.
She was then after placed upon medicinal treatment with a nutritious diet.
No bad symptoms were observed during the remainder
of the time, which had to elapse before the confinement. I delivered her three weeks after of a very strong healthy child and she made a most satisfactory recovery.

I may have omitted to mention that my patient was able to attend to household duties between the operation and her confinement as she was in every way relieved, with the exception of an occasional cough and expectoration.

I believe that there is a great similarity between this case and the last, with the exception that in the former bleeding was not performed sufficiently early to enable the kidneys to purify the blood before the disease was as far advanced.
In conclusion, I am anxious to introduce the history and facts of a case which came under my notice nearly three years ago. It was that of an elderly female, of strong and robust constitution.

I was called to see her at midnight, with all the symptoms of Strachey's. The pulse was full and bounding, and the appearance of the face showed great nervous congestion, and partial closure of the stethoscope. She could, with difficulty, speak and breathe.

The appearance of the throat, when examined by the mouth, showed great congestion, and the tonsils were enlarged and inflamed.

My treatment was directed to be the radical method of giving relief, and as the blood flowed, the breathing.
became more easy, the face soft, and within forty-eight hours the patient was up and doing her work, as if nothing very particular had happened.

Cupping which though some what the same as removing fluid from the body, differs in as much as it acts more through the vascular nerves, than through the direct influence upon the general circulation.

In ordinary practice there are two forms of Cupping one, and the other, it is unnecessary for me to explain the difference between these two methods.

Leeching is another somewhat ready and method of abstracting fluid locally and also acts chiefly through the medium of the Vascular motor nerves.
Leeching in sesualties particularly is of immense benefit, and I am recall numerous instances where the early application of one or two Leeches was followed by the happiest results.

In lumbrage, lumbago, and pleurisy pain, the local attraction of blood to affections, in shortening the course of the disease and giving relief to the distress.

I know of no readier method of relieving spinal irritations as the application of Cupps or Leeches.

I bring these short remarks on an elementary part of surgical teaching as a collateral to my paper on Rhematism or Perforation in order to illustrate the difference between the direct action of the one upon the circulation and...
the indirect action of the other through the vasomotor nerves.

In many diseases do we find it necessary to neglect the different systems of the body to enable the different organs to have full action in action. I trust when prejudices and false theories are laid aside, the practice will be recognized as of value in attacking and defeating many diseases, and will occupy that high position in the medical world which, in my opinion, it thoroughly deserves.

I find that I have neglected to include the very interesting case of Mr. W. Cornhill aged 44 years. I was called to see him four years ago about midnight, and
Found him in an Epileptic fit.

His wife informed me that he had been in the same condition for an hour and a half, also telling me that he had been in the habit of drinking a great deal of whisky, and probably mor than usual before the fit.

His temperature was 103° and his pulse 140 beats in the minute. His face was deeply congested and bluish, with large swollen veins coursing over his face and head, and a clammy sweat over his face and body.

I kept him under cool.

Soon, for some time, half,

found, that the removal of the towel, from his face was immediately followed

by the same Epileptic attack.
As his case was a very serious one I resolved, without further delay, to remove and renewed from his arm fully two ounces of blood.

I was very much pleased to find that as the blood flowed all his symptoms gradually diminished and that his face assumed its natural aspect and that the fits had also settled his appeared.

His temperature gradually became normal and his pulse quite quiet before I left him and I am glad to say that his fits did not return.