AN INAUGURAL DISSERTATION
ON

Depilation

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BY

Thomas, Lenton, Whitaker

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Tennessee

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Depletion

A large number of the diseases to which the animal organism is subject are dependent on, or consist in either a local or general fulness of its vessels. Whether a knowledge of this fact first led physicians to the employment of Depletion as a remedial measure or not, I leave for Medical antiquaries to determine; but certainly a more rational mode of relief, could never have suggested itself even to a mind acquainted with this pathologic al fact.

Depletion in its literal sense signifies an emptying, or unloading, and hence every therapeutic means which acts by relieving the general system, or any part of it, of its surplus amount of
fluids, does so upon the principle expressed by the term which heads these pages.

From this it will be seen at a glance, from what an extensive field of enquiry my subject permits me to gather in my harvest of observations, I might exhaust half the subjects treated of in our Materia Medica, and yet not transgress its legitimate limits. The term embraces substantially all those measures usually understood to constitute the antiphlogistic plan of treatment. I shall commence with the most important of these measures and descend toward the bottom of the list, until I shall have gone their length into my subject, and then desist, whether I shall have done it justice or not. Bloodletting although not as frequently employed perhaps as some other
modes of deflection, from its acknowledged superior power and from the fact that it is the most direct defleatory measure, to which it is possible for us to resort, claims our first attention. Several modes of bloodletting are employed. They are divided into general and local; to the first belong Venesection and arteriotomy; to the second Cupping, Lancing, and Scarification. Before resorting to a remedy of so much potency, it becomes a question of prime importance, whether the case is one demanding the use of the lancet. In making up our minds in regard to its employment, several considerations are to be taken into account, 1st. The character of the disease. 2nd. Its stage and extent. 3rd. Its seat and the character of the tissue affected. 4th. The age and bodily habit of the patient.
The force and frequency of the heart's action, to be determined by the use of the stethoscope as advised by Laennec, and the sensation communicated to the finger by the pulse at the wrist.

The principal diseases requiring the use of the lancet, are inflammation and congestion of the important organs of the body, as the brain and thoracic and abdominal viscera, and some forms of fever, especially those characterized by a high degree of vascular excitement.

In cerebral inflammations and sanguineous determinations to the head, constituting, or threatening apoplexy, blood-letting is the only remedy that can be at all relied on, but should not be resorted to in apoplexy until the shock produced upon the nervous system has
failed off and reaction sets in. But there is a different class of affections in which the brain seems to be involved, that are not so obviously benefited by the lancet, and which require great caution in its use. There are such as occur in conditions of nervous irritability, from intestinal irritation, exhaustion and abstinence from an accustomed stimulus &c. Inflammation of the serous membranes appear to be as a general rule more amenable to the use of the lancet, than those of the parenchyma of an organ, and those of mucous membranes perhaps less than either. And it may also be stated as a general rule, in the same order does inflammation of these different tissues enable the patient to tolerate the loss of blood. Pleuritis almost invariably demands
Reconvalescence, where as bronchitis may very often be successfully and scientifically treated by local bloodletting conjoined with the use of emetic tartar as. The same thing is true with regard to peritonitis and inflammation of the mucous lining of the bowels. While the latter will usually yield to leeching and fomentations, over the abdomen; the former requires the most active general depletion.

Physicians have long and redoubtably sought for some indication by which the propriety of general bleeding might be infallibly ascertained on the one hand, or its impropriety made clear on the other; but as yet no single condition has been found sufficiently universal for either purpose in practice. The character of the pulse is perhaps more generally depended on as indica-
ting, or contra-indicating blood-letting, than any other circumstance; but even this is very liable to mislead us, unless considered in connection with the other symptoms of the disease. In some diseases highly inflammatory in their character, the pulse will be found small and feeble; yet bleeding is imperiously demanded; and when performed the pulse will swell, become fuller and softer under the finger as the blood flows, clearly evincing the propriety of the measure. This is particularly true with regard to inflammation of the peritoneum and other serous membranes. But should bleeding fail to produce this effect on a pulse of this character, great caution should be exercised in the further detention of blood.

The reigning epidemic constitution, as
first pointed out by Sydenham, exerts a marked and decided influence over the effect of bloodletting. In what this difference consists is not known. But we do know that at one time we may draw blood with impunity in nearly all inflammatory affections, while at another the greatest caution is requisite in the use of this measure for fear of prostrating our patients. These facts are to be kept in mind, and always duly considered before resorting to a remedy of so much potency.

In determinations to the brain or lungs, threatening cerebral or pulmonary apoplectic, it is necessary to bleed "deliquium animi" and in laryngitis attended with spasm of the glottis, the same thing is called for; but ordinarily it is better to be governed by the condition of the pulse, and the effect
of the bleeding, on the pain and other symptoms of the disease. When the pulse is found to grow natural, and the pain of the inflammation to subside, it is better to discontinue and repeat it if necessary; more especially, if the disease has existed for some days, and the inflammation has become established in the part. When this is the case the capillaries having lost most of their tonicity, cannot regain their wonted contractility before reaction would come on, and this prevents the good effects that might be obtained by a more gradual but permanent reduction of arterial excitement. We cannot always accomplish all we desire by one blinding and hence it becomes necessary to resort to it a second, third, or even an indefinite number of times. It is
Just as necessary for us to have some general rules to govern us in the repetition of the remedy, as it is to determine its propriety in first instance. Our decision must here also be determined by the strength of the patient, the severity of the symptoms, and the existing state of arterial excitement. Dr. Marshall Hall remarks, "if at the first bleeding much blood should flow before syncope is induced, it must be reckoned as a criterion that the disease may require, as the patient will bear the early and efficient repetition of the remedy." The "buffy coat" has been regarded by many as a very important indication for the further abstraction of blood. But this cannot by any means be relied on, and we hear less of the buffy coat than formerly. It is not constant in
blood drawn from patients laboring under inflammation, and is often presented when no inflammation exists, especially in puerperal affections. Besides much depends on the manner in which the blood is suffered to flow, and some other circumstances, whether it presents this peculiar appearance or not. These facts show that much more importance has been attached to it than it deserves.

Venesection is the most general blood-letting to which we almost universally resort, and may generally be made from the median cephalic vein at the bend of the elbow. This is usually selected from its convenience, its prominence and its remoteness from any artery or nerve of importance. But if necessary we may bleed from the cephalic vein, just below where it enters the groove be-
when the pectoralis major and deltoid muscles
or from the jugular. Sometimes, the veins
of the foot and leg are selected with the use
of blood letting. Arteriotomy is seldom
called for, and the only cases requiring it
are perhaps severe determinations to the
head. The blood flows more rapidly exterior
facies from an artery than from a vein,
and in this way a more powerful and
sudden insufflation may be obtained than
by the usual mode of blood letting.
This is perhaps the only advantage arteri
otomy possesses over venesection, while
the difficulty of controlling the flow
of blood in the former, is a very serious
objection to it under ordinary circumstances.
The temporal artery presents the three con-
ditions required in this mode of abstracti-
ning blood viz; it is small, superficial
and rests upon a hard surface, rendering
hemorrhage from it controllable by the
surgeon, and is therefore always selected for
the performance of this operation.
Local abstraction of blood is very frequently con-
joined with general depletion. When necessi-
ty has been carried as far as the strength
of the patient will justify, and the sev-
erer symptoms have been subdued by it,
local bleeding is of great service. There
is often a deposition in the inflammation
to linger, or run into a subacute charact-
er, in which topical blood letting acts
very beneficially. Cupping is upon the
whole a more efficient remedy than
leeching. The two forming the principal
means of topical blouding. In some
mild acute inflammations in which
there is none, or but slight general symp-

toms, cupping and leeching are the proper remedies. Also in some chronic affections, especially such as are local in their character our chief reliance is to be placed on them. Leeches may be applied to the temples, nape of the neck, along the region of the spine; on the chest, over the kidneys, liver, etc. Leeches are generally preferred when blood is to be abstracted from the flabby walls of the abdomen, and may be applied with great benefit over joints affected with inflammatory rheumatism. They are also highly useful in certain conditions of the uterus, when applied by means of an appropriate instrument, to the region of the os. In diarrhoea, dysentery, engorgements of the liver, and fulness of the head, it is said that leeches have been applied with much benefit to the aches.
It appears highly rational that much good might be obtained by this means in the affections mentioned; for a more direct method of unloading the portal system could not be devised. What is the manner of its effect on bloodletting as a remedy? The general effect of a full bleeding, especially in a strong subject, is that of a sedative, as evidenced by the muscular weakness, diminution of the force and frequency of the systole, actions of the heart and other symptoms of depression of the vital forces. This effect is probably produced first by a reduction of the quantity of the circulating fluid, by the amount lost; and secondly by rendering that which remains less stimulating, both to the sanguiferous system, and the nervous centers. It is doubtful according to
No. Andral, whether the fibrin of the blood which is generally increased in inflammation, is diminished by blood-letting; or, then it is doubtful whether its formation is retarded by the loss of blood. That the proportion of solid constituents of the blood are diminished in the aggregate, there can be no doubt. It is well known the stimulating quality of the blood is due to its solid ingredients; and hence in proportion as these are proportionately reduced in quantity by abstraction of blood, must that remedy act as a red. The red corpuscles, which perhaps constitute the most stimulating ingredient of the blood suffer the greatest proportionate loss from bleeding. Abstraction of blood then acts in a therapeutics way, first by relieving engorgement,
secondly, by diminishing the quantity of fluid circulated, and consequently the per- 
capita share of the inflamed organ, and thirdly, by diminishing the force with 
which the vital fluid is sent out from the heart.

Increased secretion is another very im-
portant mode of depletion, and one in fa-
lly and universal practice; but the limits 
designed for this sketch will not allow an 
extended notice of the various means by 
which this end is accomplished. The most 
important of them, however, are purg-
atives, diuretics, diaphoretics, and chololo-
gues. This class of depletories have one 
advantage over blood letting, in that they 
imitate a process of nature by depleting 
directly from the part affected, as ex-
emplified by the action of purgatives,
in serious intestinal inflammation, expectorants in bronchitis, fomentations in cutaneous affections &c. In many cases these measures are sufficient without the use of the lancet and cups; but in severe cases requiring deflection, it is better to use in conjunction. They are perhaps always more or less demanded, after general and local bleeding, has been carried as far as a due regard to the symptoms and for the patient's strength, will justify. Like blood-letting, some of these measures act relatively particularly purgation. It has been remarked that you may bleed a man to death by means of purgatives; and this is substantially true.

By constant and continued purgation the blood becomes impoverished, and an
anemic condition of system is produced, probably by preventing the chyle from being taken up by the lacteals. The blood may also be greatly diluted by purgation, particularly if the saline cathartics be used, by which its stimulating quality is made less. By means of some of these medicines the blood is enabled to eliminate through the emunctories. They stimulate, noxious matter which may be present in it.

In the use of these various remedies it should always be remembered, that though a slight stimulant emfissio produced upon a secreting organ, is followed by an increase of its peculiar secretion, yet the excitement may be, and is above the secreting point" as it is termed; and therefore
where there is much inflammatory or febrile action present in the system, it is always proper to reduce it by general means, before attempting to excite the special secretions. If this caution be neglected we but heighten an action already too high, and it may be in an organ predisposed to inflammation, and thus add mischief to what we are attempting to relieve.

The excitants of all the various secretions are occasionally available as means of depletion; of these comminagogues existing and cicatrogogues need but to be mentioned. I will merely remark in conclusion of this portion of the subject, that serious accumulations in the different cavities of the body are generally relieved by means of purgatives and diuretics.
They act by depriving the blood of its watery constituents, and the absorbents to meet the demand thus created, drink up the effused fluid.