Thesis
on
the causes, symptoms, 
&c. of Autumnal Fever,
Presented to the
Medical Faculty,
of the
University of Nashville
Session 1837 &
By
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of
Lexington District
So., Va.
Gentlemen in compliance with the requisitions of this Institution, I present for your consideration my views and the causes and symptoms of Autumnal Fever.

Causes: The continued retarding heat of summer, especially when accompanied with moisture, stagnant water, when the sun has full action, but the winds are excluded by woods. These causes never fail to prepare the inhabitants for either remittent or intermittent; the moist atmosphere of such places, operating upon the superficial capillaries, repels the blood from the surface, whereby the accumulation upon the internal capillaries exceeds a certain proportion; or
is thrown in so rapidly, that the capillaries cannot adopt themselves to the accumulating volume, a reaction takes place in them, by which an effort is made to relieve themselves from embarrassment. This process is strikingly illustrated by exposure to cold. The first effect is a pallor of the surface, occasioned by a vast reversion of the blood from the capillaries of the skin; in consequence of which, an unequal quantity is suddenly thrown in upon the internal capillaries; this re-acts the consequence of which is, that not merely the egress of blood is curt back upon the superficial
Capillaries, but also a portion of that of the internal from the energy of their reaction, which produces a gloss upon the surface. In fevers, the injury sustained by the superficial capillaries is not immediately remedied; and consequently, the reaction of the internal capillaries, does not at once overcome the atomic state of the external, and the reaction is perpetuated, and the fever continues. The immediate tendency of the fluids cast from the external capillaries, is to the liver and spleen; as the blood recedes from the surface, it accumulates in these viscera, or some other internal organ.
but in our autumnal fevers, principally in the spleen, inducing enlargements, chiefly of the latter. In such cases it would appear that there is a constant effort in the spleen, produced partially by its contractile powers, but more by the action of abdominal muscles, diaphragm, and the mechanical influence of the other abdominal viscera, to relieve itself of the excess of blood with which it is charged, by throwing it into the general circulation. The reaction of the capillaries of the spleen, liver, etc., then operate upon the external capillaries, and fever is the result of this struggle between the two capillary systems.
In addition to the causes already mentioned, remittent fever may be and frequently is induced by overfatigue, debauch, and all kinds of excess, and irregularities; sudden changes in the atmosphere, more especially, when the system is predisposed to fever. The term bilious has been applied, and very improperly, to designate this fever; almost any other organ is as liable to become the seat of local disease, from fever as the liver—"Nothing," says Daniel, "has done so much towards making this term fashionable as the free use of drastic purgatives, in most acute diseases within the last forty years. Almost any person in health may be invaded.
day purged into what is commonly called a bilious habit, by the fre-
use of Calomel, and by Abstention.

By active purging, the blood is
devoted to the abdomen; the liver
its largest organ, receives and in-
creased volume, and its secretion,
are augmented. So long as the
secretory function of the liver is
exercised, the quantity of bile is
increased by each additional amount
of blood determined to it, but in
many instances, the volume of blood
card upon the liver is so great and
sudden, as wholly to overpower it
in the exercise of its functions,
whereby the secretion of it is suspen-
ed.
This has been known to occur habitually in concentrated cases of autumnal fever, and in yellow fever. In these cases, free purging will sometimes, by diverting some of the except of blood from the liver immediately to other abdominal viscera, relieve the former from a portion of the blood that has overpowered its action, when the bilious reaction is restored; but such a measure without improving the condition of the patient, increases the tendency of the blood internally, and exhausts further his little remaining strength. The existence, then, of increased bilious reactions in our autumnal fever is rather a consequence, than a cause of the discard, and is sometimes
a consequence of the injudicious use of active purgative medicines.

Symptoms:—The first impression to the sensations of the subject to the cause of autumnal fevers is to nature and manner of application whatever is perceived in the skin. The second is a sensation of the taste; this sometimes exists for several days. Afterward, follow pain in the head, loins and deep-seated bones, nausea, occasional gripings, sense of latitude, thirst, &c. The appetite which before had been impaired, becomes not unusually, very keen, just before the supervision of the disease. This is attributable to the accumulation of blood in the
Capillaries of the alimentary canal, in consequence of which, there is probably an increased secretion of gastric juice; this increased desire for food is frequently in a ratio with the severity of the impending attack, and more constantly precedes severe than mild cases. Upon the supervention of the chill, the surface is inelastic and shrunk, the skin on the hands and feet becomes wrinkled, and palpable pits especially in the extremities, follow the pressure of the finger upon the skin, which loses its natural appearance, and becomes more or less colored with the venous blood, which would seem to loiter in the capillaries.
Pains are felt in the acutely seated bones, from the undue determination of blood to them, as remarked by Rush. The respiration is oppressed with frequent sighings; from a similar cause a sense of fulness is felt in the abdomen. As the chill advances, nausea is induced, frequently followed by vomiting or retchings, which usher in the hot stage; which may be considered as the result of a reaction in the internal capillaries; to believe themselves from the accumulation of blood upon them, sometimes from want of power in the internal capillaries, the reaction is not adequate to the restoration
of the circulation and heat to the surface - and this, indeed, in many cases, speedily terminated fatally.

In these cases, upon autopsy's examination, great accumulations of blood internally are observed.

Here then is great restlessness and complaint of internal heat.

At other times, the external capillaries yield more rapidly and the paroxysm terminates in perspiration.

In some instances, the external capillaries yield so far to the reaction, as to become the passive conductors of the gaseous part of the blood, which then issues off profusely through the pores.
This perspiration is profuse and clammy, and always unfavorable; in almost every case of fever that terminates unfavorably, there is this character of perspiration present at some stage. Here the surface is cool, if not cold, and the evaporation of the perspiration subtracts further from the heat of the system already below the healthy standard. Occasionally, there appears to be a fixed resistance in the external capillaries, and a protracted reaction in the internal. In such, the skin is constantly hard, dry, rough, and very usually yellow, occasional petechiae.

The adnexa of the eye is yellowish.
and watery, with its internal vessels deeply injected with blood. The remissions are imperfect, and frequently in the course of the disease disappear. The stomach is usually but slightly affected with nausea, the bowels are disposed to constipation, the urine is straw colored, in some instances there is an entire suppression, in others a mixture of blood and urine, and occasionally, with very little or no urine, there are frequent discharges of almost pure blood from the bladder. There is occasionally slight delirium. The sleep is disturbed. The pulse is quick and frequent, with some degree of
There is frequently great gastric irritability, attended with bilious vomiting, especially upon the introduction of fluids in the stomach. The thirst is excessive. The teeth are covered with a dark border. The tongue is covered with a yellowish or brownish coating. The patient's flesh gradually wastes away. The pulsations in the abdominal aorta are observed through the covering of the patient, who is now very feverish and irritable. His appetite and thirst become pretty constant, and he dies at the terminations of from fifteen to thirty days usually comatose, and in a state of extreme
emaciation. Previous to death, there is a great disposition in
the skin to the production of pores, upon which thick scabs form.

- The indication of
cure are to equalize the circulation, and then relieve the internal organs from the force of
the disease. In this consists the
whole secret of removing all
forms of fevers. In order to effect
this great disorder, we must,
first cleanse the stomach and bowels, and restore a healthy action
of the same. Secondly—Restore all
the secretions and excretions.
Thirdly—Support the strength of
the system.