AN INAUGURAL DISSERTATION,
ON
Determination of Blood

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Determination of Blood

The idea conveyed to the mind by the phrase determination of blood, what we believe to be the true pathological condition of the affection. By determination, we are to understand a certain direction given or an absolute tendency to some particular point the power of directing the Blood, as said by some authorities to be the sole province of the heart, and that the heart is the main organ concerned in producing determination of blood in all parts of the system. This is what we wish to controvert, not the we are vain enough to attach the opinions of those who have written on this subject.

But we merely wish to give
Our opinions, be them right or wrong, in determinations of bloods and organs. On part, we believe the heart has nothing to do in producing it beyond its normal action. We are taught by the professor of surgery that all action was contraction, the heart contracting on its contents forces the blood into the aorta. The sigmoid valve closing prevents regurgitation. The aorta contracting on the blood as it enters, keeps up its onward movement; through the whole system. Now when the arteries are in their normal condition, that is capable of serving their true physiological function, which
must be remembered is contraction in this instance all parts of the body will receive their due and normal quantity of blood. But on the contrary, if any part of this set of vessels be in a weakening state, they will become expanded, dilated, they yield to the mechanical pressure of the blood, and of course receive and contain more blood than when in a healthy condition. Whenever the coats of an artery are relaxed, blood rushes into fill the space, upon hypertensive principals, independent of the heart's action. For instance a
Man is taken with convulsive
form of apoplexy without
a moment warning and he
falls as if shot through the
brain; at the time of seizure
the heart may be acting per-
fectly natural. Now where are
we to look for the true cause
of this much to be dreaded
disease? It is our opinion
that the true cause can
only be found in the vessels
of the brain itself. The ne-
uro influence is not trans-
mittable to this organ in any
quantity. They yield to the
contains blood, becoming
larger and in this way
produce considerable amount
of pressure on the brain producing all the symptoms of compression of the brain. Again in blushing we have another marked example of determination taking place independently of the heart action. The vessels of the cheek and face become all at once intensely red and with gushing blood the nervous influence being withdrawn from these vessels and more freely spreaded in the brain during the great mental excitement, going on with persons labouring under great embarrassment, the blood vessels of the face.
and check pulse dilates quite way to the blood which instantly enters to fill the vacuum thus created. If this was produced by the heart action why not this flushy appearance, extend to all parts of the body? For the heart's action must be general, for it cannot send more blood to one organ than an other. As illustrative of my position on this point I would take the hydrant in the vicinity of Nashville let this basin represent the human heart, the main trunk leading off the heart now when the water leaves the basin and enters the same
Pipe leading off from this basin by what power is its future course directed. Can any one tell its future direction on the City below. Or in other words has the basin any Control over the Stream after it enters the Main Trunk, unquestionably it has not, the future Course of this Stream must now be under the entire Control of this Main Pipe, and its branches, and this will depend entirely upon the relative sizes of these branches, the houses are to represent the various Organs of the human body. It is evident then that the House that gets the most water will of necessity have the largest Pipe leading off.
from the main trunk. Just so
with the circulation in Man
in a healthy condition, all parts
receiving their due quantity of
blood. If otherwise, that is if
the vessels should be in a mobi
condition, dilatation, accretion
and determinations of blood
necessarily take place. And
it is of the utmost importance
to the individual that this
compelling state of the arteries
should always be present
for it is this very Condition
of the arteries above state
that gives rise to Amurinal
sacks for in true amurine
canaphrhist without the coats
of the artery, building; for it
is the proper function of the
Arteries to keep closely contracted upon their contents, for it is upon this principle that we account for the Arteries always being found empty after death than of exerting their Contractile powers even in Articula Mortis; the throbbing feel that is present in an inflamed part, we take this as still further proof of their weakened and dilated condition. Which is generally ascribed to an effort of the heart to propell the blood through the inflamed part. If we collect that the Arteries are bent tubes, being bound down at different parts by strong ligaments, and bands of muscular fibers at the same time flowing...
True. They have two distinct actions. One transverse, the other longitudinal, than of course when the heart is elevated by its systole a jerking motion must be given to the artery, and this motion will be increased. If the artery be lengthened, in the same manner as the string of the violin is made to vibrate fuller as it becomes less tense, so if the artery possesses its own contractile power, the increased fullness of its pulsations cannot take place, again we can produce these determinations of blood by some other means. For instance, we apply a blister for the purpose as we call it of producing a determination of blood.
from a labouring organ. This is done by the lips abstracting the nervous fluid from the part. The vessels yield. Give way down an undue quantity of blood. This is not done by exciting the heart to increased action, but upon the principle above stated. We will next speak of the treatment of apoplexy. In sustaining our position, we bleed and bleed copiously, not to moderate the actions of the heart for it is generally found to be beating slow and soft but we bleed to lessen the amount of blood in the general circulation so in doing at necessity. Make a cut upon the vessels of the brain by which we give those vessels some power a cut which actions
Contractions and enable them to expel the super abundance of blood from the brain. Arstic purgation has the same general effect that of determining the blood to the bowels also connected with purgation. Some nervous excitement may be produced in the spinal cord and transmitted to the brain by reflex spinal action and in this way aid the brain in discharging into its vessels nervous influence. Nervous fluid. Electricity or whatever it was that may be a cause of which was the primary cause of the attack, the good results of blood letting in all local determinations whether by cupping or the lancet has the same general effect. Note that of malarial the congested and engorged state of the blood vessels made giving them power to contract.
In taking leave of my subject
I would seek the lenient criticism
of the Faculty upon this
my maiden piece, it being
written without reference to a
single Book; the ideas being
gathered here and there during
the arduous labours of the
Faculty, in imparting knowledge
to the Medical Mind, which
is afterwards to operate over
wide extents of fields, as
Mender of ease to suffering Man.