AN INaugural dissertation
ON
Congestive Fever
Submitted to the
President, Board of Trustees,
and Medical Faculty
Of the
University of Nashville,
For the Degree of
Doctor of Medicine.

by
Joel Calhoun
of
Lafayette Geo.

1858.

W. T. Berry and Co.
Booksellers and Stationers, Nashville.
Congestive Fever.

Is this cognomen indicative of the pathology of the disease to which of late years it has been applied by the physicians of the South and West? Is there anything peculiar to the congestion always met with in this fever which justifies the substitution of this appellation for that of "Fesnicious Intermittent," which title is given to a fever very similar to—if not identical with—the one under consideration, by European authors? Congestion of a mobile kind is common in nearly all fevers intermittent Remittent and Continued; it will accompany winter epidemics, in which the thoracic organs are the chief sufferers, and summer and autumnal, in which the lesions of greatest magnitude.
are in the abdominal viscera and brain. 

Many fevers without local disease of some kind is of rare occurrence. Take intermittent fever, for example, the most simple of all idiopathic or essential fevers, in the majority of the cases of which, there is congestion of many, if not all, the viscera of the three great cavities. 

To use a modern phrase, we have, during the cold stage of an ague, a state of hyperemia of the internal and anemia of the external parts, or, in other words, the equilibrium of the circulation is lost, the blood forsakes the surface and accumulates in the internal organs. This proposition is proven in every way that a pathological proposition can be proved. It is confirmed by an examination of the symptoms, by the results of treatment, and by dissection to far as it goes. In this country, however, we seldom have an opportunity of examining
The bodies of patients who have died in the cold stage, for the simple intermittent of this country, rarely ever terminate fatally. Let us take the different parts of the system during the cold stage and see how far the symptoms point out an accumulation of blood. First, there is a feeling of fulness and tension about the head, more or less headache, the sensibility is diminished, and there is frequent strophon and coma. The legitimate conclusion, deduced from these symptoms, is, that there exists congestion of the brain. If we turn to the respiratory system, we find of very frequent occurrence, lividity of the face, anxiety, cough, and hurried breathing; there is more or less dullness of sound on percussion, and other physical signs of congestion of the lungs. If the heart is examined we find that its action is depressed, the pulse is small, irregular, &c. This view is corroborated by the indications made manifest in the abdominal cavity.
The patient complains of a sense of pain and fullness in the different parts of it; he at unfrequently has vomitting, often diarrhoea, and a copious discharge of phlegm; all these circumstances denote violent internal determination. Everyone is familiar with the tumefaction of the spleen concomitant with the cold stage of an intermittent. Sometimes this tumefaction occurs so rapidly, and the engorgement is so extensive, that shortly after an attack we can feel and trace it distinctly. Cases of rupture of the spleen from excessive engorgement during the cold stage of an Ague, and of hepatic apoplexy from the same cause, have been described by Baily. These facts are more than sufficient to prove the probability of the proposition—that during the cold stage of an intermittent most of the deep-seated organs are congested. I might adduce evidence to attest the fact—that we meet with congestion in most of the other forms of fever, but deem it unnecessary. Why then give this form of fever the appellation
"Congestive" in preference to the other?
The malignant or malignant intermittent has the same cause, and exhibits all the features of the common intermittent, but with exaggerated and more violent exhibition—whether we regard the symptoms or the visceral lesions?" If there be congestion in the simple, it is still greater in the complicated kind; and whatever course of pathological reasoning may be deemed valid to explain the successive changes by which congestion is brought on and removed in the former case, must be of equal force in the latter, whether we regard it as dependent on the want of power in the capillaries to contract, thereby producing a stasis of the blood, or on nervous irritation, and irregular innervation, which latter is the opinion of Dr. Bell. He says, "There is disordered or unequal innervation; but not a direct defect of nervous power; an innervation, such as would ensue on the removal or paralysis of the nervous centres, or of the great ganglions and plexuses."
position assumed by Dr. J. Parish (late Med. Col. Physician). It would be absurd to refer the mild attack of paroxysms intermittent or congestive fever to anemia and stop of power of the heart and circulatory apparatus generally. Even those paroxysms, the agyia and the sweating, which evince the greatest feebleness of nervous powers, could not be produced by its entire suspension.

In the agyia form the sensation of coldness communicated to the hand of another person, when applied to the skin, is not experienced by the patient himself who may be, as the most frequently is, at the very same time complaining of the most intense heat.

"Calorification is imperfect here," Dr. Bell says from analogous causes to that which interferes with the freedom of the heart's contraction and the circulation viz. the intensity of nervous irritation. As to the sweating variety, all the secretions would be arrested by the suspension or extreme exhaustion of the function of the nervous center, consequently we must at-
attribute the copious perspiration to quite a different condition of things from that of mere nervous debility. The secretion from the skin, like that from the mucous surface of the alimentary canal, is the result of congestion and nervous irritation.

Dr. Bell thinks, that we are justified in affirming, that, congestion has a generic signification when applied to pernicious fevers, under which head he includes, as well those of an intermittent as of a semintermittent, and occasionally also, of a subcontinuous type, and that if congestion be not a specific designation, it is in a great degree applicable to the fevers in question than to others, hence he made use of the term congestive in speaking of this disease, which he explicitly declares to be identical with the malignant or pernicious intermittent and semintermittent fevers of the writers of Continental Europe, and has been more particularly described by those of Italy.
Congestive, or Pernicious fever, has been described by Torti, under seven different varieties, based on the predominance of certain symptoms, viz. The Choleric, distinguished by vomiting and diarrhoea, 2° The Hepatic, 3° Cardialgie or Cardiac, 4° Diaphoretic with its cold sweat, 5° Syncopeal, 6° Algic, 7° Comatose or Lethargic. This has served as a basis for that of most of subsequent systematic writers. Torti is said to have been among the first who extolled the beneficial effects of Benjoin Bark in this disease. He gave cases under the several heads above-mentioned, in which the bark was administered with signal benefit, and, to all appearance, it was the only treatment which exerted a positive influence over the disease. Among others Torti gave his own case which assumed the sweating form and with such intensity and exhausting effects as to make him and his medical friends and attendants despair of his recovery. The Dose Bark however, and was
tored, as if led from the jaws of death.

Dr. Baillie gives a detailed account of more than sixty cases of Terrlicious or Malignant Intermittent Fever, under the following classification.

1st Those fevers, the predominant symptoms of which were furnished by the head, and called comatose, delirious, and convulsive. 2nd Those whose chief symptom is abdominal disorder, epigastralgia, gastric fever, softening of the liver, softening of the spleen. To the inquiring pathologist, who ought to be something more than a mere morbid anatomist, the post mortem appearances of some of those who died of this fever would not be uninteresting. These show, however, that which has been demonstrated time and again—that we cannot designate a fever by a distinctly ascertained anatomical character of the lesions which may occur in its course.

One case recorded by Dr. Baillie exhibited after death arachnitis, encephalitis, and gasto-enteritis.
The patient had been labouring for some time under a tertian fever. He entered the hospital on 2 July, on the next day he had a paroxysm of fever, after which he took two ounces of bark; on the 5th at noon he was walking about in the ward, felt very well, and was joking with the other patients, still at one he was seized with a violent chill, which was succeeded by high fever, contraction and inflexion of the fore-arm on the arm, and profound coma; he died in six hours from the accession of the fit.

Dr. Maillot, who was for some time attached to the French army in Africa, believes himself justified in asserting that intermittent fever is intermittent cerebro-spinal irritation. The bad or promising intermittent he regarded in the same light with that inoculated by John Bell, M.D., Priz, as a complication of nervous irritation, with a lesion of the brain or of the abdominal or the pelvic viscera. He describes these forms referable
to a lesion of the cerebro-spinal axis, and these are considered the most important (viz., the Comatose, the Delirious, and the Alzai). In the Comatose form, the stupor may vary in degree from simple oppression to profound coma. The pulse is full, large, without hardness, sometimes quickened, occasionally retarded; the respiration is slow, noisy, stertorous. The patient lies supine, and his limbs appear paralyzed; the jaw is firmly closed, and deglutition is difficult; sometimes there are epileptic spasms. These violent symptoms commonly occur with the second paroxysm, nothing occurring before to give warning of them, except it be slowness of speech during the apnea. After an uncertain continuance of the comatose stage, the waking one follows, and the patient slowly recovers, wearing an extraordinary air of astonishment, and seeming to recover his senses one by one. The delirium form resembles so much the comatose that it needs not a separate description. Its name
indicates its chief peculiarity.

The algid form is quite peculiar. M. Maillot has shown that it is not, at least generally, an indefinite prolongation of the cold stage, as some are inclined to think. In the cold stage of common intermittent, the sensation of cold is out of all proportion to the actual reduction of temperature; whereas in the algid stage of congestive fever, although the skin is of ice coldness, the patient complains of intense heat. The circulation becomes disturbed and lowered, and the pulse is scarcely perceptible, while there is rapid reduction of the temperature of the body.

The extremities become cold first, then the face and trunk in succession, the abdomen remaining warm longer. The skin has the coldness of marble. The tongue is cold, pale, and moist, the lips are colorless, and the breath is cold. There is no thirst and attempts to drink frequently excite vomiting. The contractions of the heart become very feeble, and can scarcely be appreciated except by auscultation. The intellectual faculties are undisturbed, and
The patient experiences a sense of agreeable repose. All expression of the face is lost, and the countenance becomes quite a blank. To these symptoms, all those consequent on the gastro-enteritis, may be joined.

Mr. Bailly in his chapter on diagnosis, always notes the insidiousness of the approach of the agid form so insidiously indeed as to be mistaken for a remission produced by bloodletting. The patient may have been walking about a few minutes before his last attack; the attack is sudden, he lies down and dies in a few hours.

Mr. Maillet says that whenever a sudden petechial rash succeeds the reaction and the tongue is pale and the lips discolor, we need not hesitate to pronounce a diagnosis of the agid form.

Dr. Dickerson of the Med. Col. of South Carolina, after giving a description, very similar to that of the French writer, of congestion fever supervening, and biting reminiscence, says, "You will meet occasionally with, though it is to be hoped rarely, a truly..."
malignant form of our autumnal fever, not less
to be dreaded than the most terrible shape of any
other febrile disease. In this the system seems to
sink at once prostrate before the invasion or exacerbation,
which frequently at times can be called fulminating.
Reaction, to use our technical phrase, does not take
place, or very fully if at all. The skin is cold and
covered with a clammy sweat, as in the collapse of
cholera. The pulse is weak and fluttering. The
stomach is very irritable, with frequent and pain-
ful, but usually ineffectual efforts to vomit. The
countenance is shrunk and pale or livid; there
is often low muttering delirium, with shivering
and fainting. In some cases, no complaint is made,
but lethargic insensibility seeming to oppress the patient;
in others the most extreme anguish is induced by the
miserable sufferer, who in his agony often utters
a groan or loud cry. The vital powers are speedily
and irrecoverably exhausted by this scourge of
a few such exacerbations, although the semiprostition in this class of examples are apt to be well defined and full of transient relief and consolation.

The third, fourth or fifth return of the train of symptoms just delineated, for the most part, puts an end to the distressing scene."

It is generally conceded by physicians that congestive fever has for its cause that common to intermittent and remittent fever, or in other words, that it is the aggravated irritation produced by the introduction into the system of a specific poison, called malaria. In the present state of our knowledge, I think this is as good an explanation of the etiology of the disease as can be given, as to the mode of operation of this poison there are several different opinions, and some even deny its existence altogether. If this existence of such a poison however I had no doubt, therefore will not take time to introduce authority for or against it.

Whether it is introduced into the system by inhalation,
or through the mucous membrane of the alimentary canal, or through the skin as is thought by Dr. Dickson is a matter most of conjecture than of fact. I am however inclined to favour the first proposition as most plausible of the three. Carpenter in his book Human Phys. page 161, after giving an analysis of the blood, says, "These facts seem to suggest a very important office for the red corpuscles, which is in harmony with all we know of the plication which their amount in different animals and in different individuals of the human species, bears to the development of nervous muscular power; namely, that they are especially concerned in preparing the panicleum for the nervous and muscular tissues; the red corpuscles appear to have a remarkable power of absorbing certain gases."

Now if it be a part of the function of the red corpuscles to absorb gases from the atmosphere and if malaria be a gaseous poison inducing the atmosphere, I think the inference is legitimate, that it is introduced into the system in this way and
manifests itself, or rather, its effect, by a lesion of inflammation, which is said to be the lesion peculiar to this disease. I would suggest to our Chemists or inquiring pathologists the propriety of making a critical analysis of this ingredient of the blood taken from a patient labouring under the evil effects of malaria.

Dr. Bonnette, in the *Orleans Medical Journal*, Vol. 1, p. 144, says that those cases of fever designated congestive fever in Mississippi prevail more or less from the first of August to the first of October. They generally occur in those years when the summer and autumn are characterized by much hot and showery weather. He believes many cases called congestive fever are only forms of disease grafted on the ordinary mild bilious or persistent fever of the country, by our medication, and particularly by the creeping use of calomel.

Dr. Montgomery seems not to have been satisfied with our commonly received etiological explanation.
The fever (in an essay on the Med. Topography and disease of Certain Countries of the U. S.) Why was it that the most elevated, dryest and apparently most arid regions should suffer most in 1844? The diseased in the summer of that year prevailed all over the dry elevated country, while the Creek bottoms, swamps and valleys were almost entirely exempt. It was indeed remarkable says he on another page. I need the real congestive fever manifest itself upon our dry plains hills, whose former a physician was rarely ever called on.

The symptoms of congestive fever, both premonitory and actual, are nearly the same as in common intermittent, but greatly aggravated, with the additional design, generally of some important organ, either the brain or some of the abdominal viscera. Dr. Montgomery says, “The sick patients walking to and fro, apparently little disposed, and all at once a chill seizes them; the consciousness becomes dark.
and cadaverous. The extremities become cold and there
is asphyxia, palpitation, anxiety, precordial oppression,
a small, quick, weak, and thready pulse, sense of
burning and fullness about the stomach; great
desire for cold drinks, and if the congestion
is to the brain, there is confusion of intellect.
The patient is so strong that it takes two or three
men to hold him in bed; the forehead bathed in cold
sweat, which is not uncommonly all over the body
and extremities. If the congestion is in the liver
and abdominal viscera, there will be great irri-
tability of the stomach, vomiting of blood, and
bloody discharges per anum."

Dr. Bell, in speaking of the symptoms and diagnosis of
congestion fever, says, "If a paroxysm of intermittent fever be
unequally prolonged — if it be associated with
a new and alarming symptom indicative
of any one of the functional disorders already
described — we have reason to fear
That the fever has already assumed the congestive form, and that the next paroxysm will be one of increasing violence and danger, if does not actually end in death, our suspicions will be further increased if, after the subduction of the paroxysm and during the interval which follows, the patient, instead of feeling partly well or exempt from all complaint, exhibits a dry and almost searing tongue, restless, complains of pains in the limbs, gives long sighs, has nausea and vomiting or disordered bowels, is inclined to sleep more than usual, or is unusually excitable and wandering in his thoughts and speech. In forming a diagnosis and must be governed somewhat by circumstances—the history of the patient, and the epidemic prevailing in the locality at the time.

When the patient is labouring under intermittent fever, and the usual symptoms and stages run into each other, or are supplanted by violent
functional disorder, which persists until the time of the next paroxysm, we may feel assured that we have to deal with a case of congestive fever, and one or two of alarming import. Any great deviation from or notable addition to the usual course of an intermittent, which manifests a disposition to paroxysms, should be prevented from returning, for its recurrence is apt to bring with it increased danger.

When congestive fever supervenes on intermittent, the coma or cholera or delirium comes on suddenly, attains its maximum intensity in a very short period, and declines as rapidly, leaving the patient in an imperfect state of ease, but which contrasts strongly with the extreme violence of the symptoms a few hours before. Bell says: "The diagnosis in congestive sub-continued fever is very difficult, as we do not see the contrast of calm and violent disorder so observable in the periodical clap, our fears will be awakened when these fevers succeed or replace the intermittent or"
Remittent form, and appear epidemically, or in the same region with the latter.

Torti speaks of a want of pulse for days in his choleric variety of remittent intermittens. Congestive fever does indeed exhibit the remarkable phenomenon of a patient being entirely speechless even up to the large arteries, and yet to preserve his intellect and power of locomotion. We sometimes meet with a case just prior to the one just alluded to, in which there is a loss of sensibility, thought and motion, and yet a full strong and regular pulse, and the skin bathed in sweat. By this last feature we are able to discriminate between this disease and apoplexy, in which the skin is neither hot or moist, and the expression of the face is rather that of a person sleeping than in the paroxysm of a fever. In reference to the alleged that cold and freezing form, if there is a speedy reduction of the temperature of the skin, and the patient retaining his intellect and to some extent his power of locomotion, and may be...
certain that we have one of this kind to deal with.

In congestive fever the natural secrections especially suppressed of the mucous follicles of the gastrointestinal surface are generally suppressed, and instead of the natural excreting these it sometimes discharges per annum a large quantity of a tawny or dirty reddish coloured fluid thereby causing creeping congestion of the vessels of the intestine, and high irritation of the abdominal nervous system by which the functions of the secretory is strongly excited. Writers have usually directed more attention to the urine than any of the secreting as professing most value in diagnosticking periodic fever, simple or congestive. The limpidity sediment found in the urine that for a long time been alleged to be a characteristic symptom. Sydenham among other speakers of the colour of the urine, which in intermittent is mostly of a deep red (but not so red as in jaundice) and likewise let fall a limpidity sediment. A similar sediment, says Well, it an index to an inflammation
affection or at least to its partial remission, although in this case there is a cloudy or thickened portion of urine, which affects its transparency, rather than a dart-like precipitate at the bottom of the vessel, which mixes uniformly with the urine as in intermittent fever. The urine in the last affections is quite limpid; the sediments, when at rest, form a thin layer at the bottom of the vessel, whilst an most inflammatory affections the sediments even when the urine is at rest, has some lines of thickness, and it is partially blended with the upper portion of urine, and has the same specific gravity with the latter. It resembles in fine clay diffused in water, and not a colouring matter heavier than the urine, such as are found to be the case in intermittent fever.

The progress of true congestive fever, says Bell, is rapid; the danger increases with each successive paroxysm, sometimes a fit of great violence is succeeded on the following day by one of great mildness, and favourable hopes are entertained in consequence. But this fit is
followed by another on the following day of greater violence than the first, which may even bring with it fatal results. Congestive fever is usually of short duration, more particularly by the periodic type, whether it terminates favourably or in death; if in the latter it usually takes place in the third or fourth paroxysm.

From the foregoing descriptions of this fever we would infer that the prognosis is good, and this is a correct inference. Our prognosis will be more favourable in those cases, where the paroxysms are daily, than in those where the apyrexia is of longer duration, as the time is shorter for the administration and operation of the proper remedies. Great prostration; any remarkable change of features; extreme drowsiness or sleep, acute pain, weak and irregular pulse, slight convulsive movements or copious evacuations occurring during the paroxysm; and of bad aspect. The delirious, comatose algid & choleric varieties and most calculated to excite the fear of the physician for the safety of his patient.
If there be great irritability of the stomac by which vomitting of the medicing administered is kept up and furriering delirium with a small of thinning pulse the prognosis is unfaourable in some cases there is a decided disposition to muscular spasm which interferes very materially with deglutition and frequently prevents the retention of cinemata in the vlick this is generally regarded as an omen of great danger dr montgomery notices this symptom particularly the difficulty of deglutition as very alarming in the aligst form of congested fever another striking symptom says he in the collapse stage is the great sense of the patient to any covering or anything warm to the extremities he will complain of intense heat of the extremities when indeed if we examine them they are of ice coldness and doped in a copious perspiration.

For forming a prognosis the physician must rely at great deal on his own tact and judgement it will then be attended with uncertainty and disappointment.
The treatment of congestion intermittent, like that of common intermittent, naturally分为 two kinds—that by which we relieve or mitigate the intensity of the paroxysm—and that which prevents its return. This fever longing the etiological explanation common to intermittent fever, and pursuing a similar course in its development and symptoms, the treatment should be conducted on the same principles.

If there be indigestible or undigested food in the stomach which proves a source of irritation to that organ, evinced by retching etc., a mild emetic should be given, generally composed of spirits and oil, or if there is much nausea, a little warm water will suffice. A laxative enema, to free the rectum of impacted feces, and evacuate the lower bowels, will be judiciously administered.

In the stage of apoplexy—indicated by shining,
cold, a febrile and frequent or intermittent pulse of
refined breathing, and0 bluntness of the intellect with
thirst and internal heat, the remedies should be
directed primarily to the mucous system, in its
expansion on the mucous membrane and skin.
To the latter of these surfaces we apply assiduous
friction, stimulating enemata. The warm
water or warm air both;
To the mucous mem-
brane apply cold water, by the mouth and for-
pethum, and then if reaction be tardy or inper-
fect, opium may be given. We must abstain from
The diffuse stimulants in this stage which is
one of irritation as well as of depression and not un-
frequently inflammation conjoint.
When the cause of irritation to the mucous membrane
of the alimentary canal have been removed, the
reactive treatment to this surface and counterir-
itation will constitute the outline of treatment.
Of the counter-irritants, laudanum itself applies to,
or dry mustard rubbed along the spine and on the inside of the thighs, legs, and arms until a positive but not painful sensation is produced, are useful. We should be careful when evacuating the bowels to do so with the least irritation, cognizant of the diversified sympathies of the colon with the rest of the abdominal organs, and of the great relief to oppressed circulation and respiration afforded by the evacuation of its contents, one of the first things that should engage our attention in the treatment of congestive fever, should be the repeated administration of laudanum enema, until a free operation is procured. As the digestive mucous surfaces is highly irritatated in this fever, the agents required are much milder than those which would at first seem to be indicated, simple tepid waters, or salt and water of the same temperature, thrown up till there are free evacuations of fecal matter will often suffice.
After febrile evacuation, if the intestinal abdominal heat still persist, and there is coldness of the skin and extremities, injections of cold water will greatly contribute to equalize the temperature.

Some practitioners have resorted to the lance in the treatment of this fever, on the same principle that Mr. Field resorted to it in the cold stage of an intermittent, but it seems without satisfactory results. Dr. Bell says, “While I have little faith in the efficacy of venesection for the removal of congestion merely, I would not deny the utility, and often the necessity, of blood-letting in cases in which there is inflammation associated with fever.” Bailey and they have spoken of the beneficial results of opium in this fever. Bell, after assuming that the visceral congestion, and the distended vessels of the brain were not primary phenomena, but mere effects of a disturbed nervous system, says, “If therefore we had any means of acting on it in a definite
manner and control you and keep the congestion by either preventing its occurrence or carrying it off. In the circumstances now under consideration my pathology is in harmony with therapeutical experience, which points distinctly and emphatically to opium as one of the best if not the very best and safest remedies prior to the coming on and actual supervision of the alarming state of congestion which distinguishes the paroxysm in malignant double typhus or the congestive fever of our country.

Dr Bouchelle (West Lancet) refers to Bell's recommendation of opium in congestive fever as coincident with his own views, he also speaks favorably of the sedative treatment in general, adopting the opinion before enunciated by Bell of quinine being a part of that treatment. He prescribes, during the paroxysm, Laudanum and cold water which, he says rarely fails to conduct the patient safely through, and during the intervals of pain, opium and quinine to prevent a recurrence.
Dr.earn of Huntsville, Ala., was the first to use the
affusion of cold water as a remedy in congestive
fever. Since that time Drs. Barbour of St. Louis,
Menin-ther of Ala. Bowbelle of Phil., and Prof.
Bowling of this school, have attested its value.

Dr. Barbour (Am. Jour. Med. Science) applied "as aux-
iliaries to the cold affusion," cupping along the course of the
spine—over the epigastrum—the right hypochondriac region—and the bowels according to indications
and at the same time warm mustard poultices to
the extremities, or had the whole surface rubbed
with strong mustard flour.

Dr. Merrinither (Western Lancet 1846)
pelied almost entirely on the cold affusion for a
solution of the fevers or the "collapse fol-
lowing the malignant intermittent of miasmatic
regions." The symptoms which seem more
particularly to indicate the remedy are
imperfect reaction with great coldness of the
surface and a profuse sweat, sinking of the pulse, great restlessness, head of the epigastrium and abdomen generally, and ineaspt thirst, the patient complaining of burning up internally, while at the same time his skin feel cold.” After the cold affusion the system begins to react, the cold sweat which was profuse, ceases. The skin gradually recovers its warmth, the pulse slowly rises, becoming less frequent and more profound. Sometimes the cold sweat again makes its appearance and with it the other unpleasant symptoms; when this is the case the cold dash must again be repeated. Dr. Sumner has sometimes had to resort to it four or five times during the twenty-four hours.

Dr. Bondville (Rev. Lane) says, “I used the cold douche in collapse to arouse the system to reaction, which it will often do than any other means that I have ever been eschewed.”
I have seen many patients as it were moribund—cold and clammy skin, thready pulse, sunken features, blue fingers, nails and lips, great opisthotonos, oppression and breathlessness, rescued from the grond as it were, by the magic influence of the cold douche. This writer speaks in very decided terms of condemnation of the stimulating plan of treatment. Says the old Dr. Parry, "all stimulants internal or external; all irritating and injurious in congestive fever. So long as I pursued the plan of correcting the secretions, and of stimulating by brandy, camphor, camphor and quinine, ammonia, jays, &c. I lost patients. But when on the other hand, after much reflection, I changed my pathology of this disease, and adopted the cold water and anodyne practice, my labors were crowned with success, and have been ever since."
The best way of applying the cold water is, to place the patient in a bathing or large wash-tub in which there is enough tepid water to cover the feet. Then pour cold water to the amount of several gallons over his head and shoulders from some distance above. After the cold water has been applied for a sufficient length of time, the surface should be carefully dried, and assiduous friction kept up on the skin by the hands or by a flesh-brush for a quarter or half hour.

To prevent a return of the paroxysm, let the patient take ten grains of the sulphate of quinia every two hours, either alone or combined with calomel or camphor as circumstances may indicate.