AN

INAUGURAL DISSERTATION

ON

CONGESTIVE FEVER.

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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 "Pernicious 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 morbid 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.
Mere fever 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
of 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 sur-
face 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
so 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 intermittents 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 fullness and tension about the head, more or less headache, the sensibility is diminished, and there is frequent stupor 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 oppressed, 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 not unfrequently has vomiting, often diarrhea, and a copious discharge of urine; all these circumstances denote violent internal determination. Every one 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 Bailly. These facts are more than sufficient to prove the veracity 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 others?

The pernicious or malignant intermittent has the same causes, and exhibits all the features of the common intermittent, but with exasperated 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 dependant on the want of power in the capillaries to contract, thereby favouring 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 and a direct defect of nervous power, anervation, such as would ensue on the removal or palsy of the nervous centers, or of the great ganglions and plexuses" a

position assumed by Dr J Parish. (Trans. Phil. Col. Physicians)
It would be absurd to refer the milder attacks of pernicious intermittent or Congestive fever to anervation and loss of power of the heart and circulatory apparatus generally, Even those varieties the Algid and the Sweating which evince the greatest feebleness of nervous power, could not be produced by its entire suspension.
In the Algid 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 he 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 hearts 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 centers, consequently we must at-

tribute 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 remittent, and occasionly, also, of a subcontinued type; and that if congestive be not a specific designation, it is in a greater 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 remittent 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. 1st The Cholerie, distinguished by vomiting and diarrhea, 2d The Hepatic, 3d Cardialgic or Cardiac, 4th Diaphoretic with its cold sweat, 5th Syncopal, 6th Algid, 7th 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 Peruvian 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 sanitive 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. He took bark however, and was

saved, as it were from the jaws of death.

Dr Bailly gives a detailed account of more than sixty cases of Pernicious 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. 2d Those, whose chief symptom is abdominal disorder — Epigastralgic & gastric fevers, softening of the liver, rupture of the spleen &c. 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 M. Bailly exhibited after death arachnitis, Encephalitis, and gastro-enteritis

The patient had been labouring for some time under a tertian fever. He entered the hospital on 2d July, on the next day he had a paroxysm of fever, after which he took two ounces of bark; on 4th at noon he was walking about in the ward, felt very well, and was joking with the other patients. All at once 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 pernicious intermittent he regards in the same light with that inculcated by John Bell M.D. viz., as a complication of nervous irritation, with a lesion of the brain or of the abdominal or thoracic viscera. He describes those forms referable

to a lesion of the Cerebro-Spinal axis, and these are considered the most important, viz., the Comatose, the Delirious and the Algid. "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, occasionly retarded; the respiration is slow, noisy, sterterous; 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 tho'ring palaed before to give warning of them, except it be slowness of speech during the apyrexia. After an uncertain continuance of the comatose stage, the sweating one follows, and the patient slowly recovers, wearing an extraordinary air of astonishment, and seeming to recover his senses one by one." The delirious form resembles so much the comatose that it needs not a seperate discription. Its name

indicates its chief peculiarity

The algid form is quite peculiar. M. Maillot 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 icy coldness, the patient complains of intense heat. The circulation becomes disturbed and lowered, and the pulse is scarcely perceptable, 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 colourless, 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-enteritic, may be conjoined

M. Bailly in his chapter on diagnosis, warns us of the insidiousness of the approach of the algid form, so insidious 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

M Maillot says that, Whenever a sudden retardation of pulse succeeds to reaction, and the tongue is pale and the lips discoloured, we need not hesitate to pronounce a diagnosis of the algid form

Dr Dickerson of the Med. Col. of South Carolina after giving a description, very similar to that of the French writers, of congestive fever supervening on Bilious Remittent, says, "You will meet occasionly 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 pestilence. In this the system seems to sink at once prostrate before the invasion or exacerbation, which scarcely at times can be called febrile. [redacted] Reaction, to use our technical phrase, does not take place, or very feebly 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 painful, but usually ineffectual efforts to vomit; the countenance is shrunken and pale or livid; there is often low muttering delirium, with shivering and fainting. In some cases, no complaint is made, a lethargic insensibility seeming to oppress the patient; in others the most extreme anguish is endured by the miserable sufferer, who in his agony often utters groans or loud cries. The vital powers are speedily and irrecoverably exhausted by the recurrence of

a few such exascerbations, although the remissions 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 fevers, 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 as good an explanation of the etiology of the disease as can be given. As to the modus operandi of this poison there are several different opinions, and some even deny its existence altogether, of the existence of such a poison however I have 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 more of conjecture than of fact. I am however inclined to favour the first proposition as most plausible of the three. Carpenter in his Com. Hum. Phy. 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 ratio which their amount in different animals and in different individuals of the human species, bears to the development of nervo-muscular power; namely, that they are especially concerned in preparing the pabulum for the nervous and muscular tissues;** The red corpuscles appear to have a remarkable power of absorbing certain gases &c." 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 infecting the atmosphere, I think the inference is legitimate, that it is introduced into the system in this way, and

manifests itself, or rather, its effects by a lesion of innervation, 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 Bonetti, in the N. Orleans Medical Journal Vol. 1st, tells us, 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 characterised by much hot and showery weather. He believes many cases called congestive fever are only forms of disease engrafted on the ordinary mild bilious or remittent fevers of the country, by over medication, and particularly by the excessive use of calomel.

Dr Montgomery seems not to have been satisfied with our commonly received etiological explanations

He says, (in an essay on the Med. Topography and disease of Certain Counties of Miss.) why was it that the most elevated, dryest and apparently most salubrious counties should suffer most in 1844?
The disease 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, to see the real congestive fever manifest itself on our dry pine hills, where formerly 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 seizure, generally, of some important organ, either the brain or some of the abdominal viscera.
Dr Montgomery says, "the new patients walking to and fro, apparently little discomposed, and all at once a chill seizes them; the countenance becomes dark

and cadaverous, the extremities become cold and there is dyspnea, restlessness, 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 to hold him in bed; the forehead bathed in cold sweat, which is not unfrequently all over the body and extremities. If the congestion is to the liver and abdominal viscera, there will be great irritability of the stomach, vomiting of blood, and bloody discharges per anum"

Dr Bell, in speaking of the symptoms and diagnosis of congestive fever, says, If a paroxysm of intermittent fever be unduly 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 subsidence of the paroxysm, and during the interval which follows, the patient, instead of feeling pretty well or exempt from all complaint, exhibits a dry and almost scabrous tongue, is 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 unduly excitable and wandering in his thoughts and speech. In forming a diagnosis we 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 suppressed 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 too 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 an increase of danger.

When congestive fever supervenes on remittent, 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 subcontinued fever is very difficult, as we do not see the contrast of calm and violent disorder so observable in the periodical class. 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 cholerie variety of pernicious intermittent. Congestive fever does indeed exhibit the remarkable phenomena of a patient being entirely pulseless even up to the large arteries, and yet to preserve his intellect and power of locomotion. We sometimes meet with a case just <u>vice versa</u> 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 Algid—that cold and freezing form—if there is a speedy reduction of the temperature of the skin, and the patient retains his intellect and to some extent his power of locomotion, we may be

certain that we have one of this kind to deal with.

In congestive fever the natural secretions ~~and ex-~~ ~~cretions suppressed~~ of the mucous follicles of the gastro-intestinal surface, are generally suppressed, and instead of the natural excretions there is sometimes discharged per annum a large quantity of a serous or dirty reddish coloured fluid, thereby evincing excessive congestion of the vessels of the intestines, 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 secretions as possessing most value in diagnosticating periodical fevers, simple or congestive. The lateritious sediment found in the urine has for a long time been alleged to be a characteristic symptom. Sydenham among others speaks of the colour of the urine, which in intermittents is mostly of a deep-red, but not so red as in ganning, and likewise lets fall a lateritious sediment. A similar sediment, says Bell, is an index to an inflamatory

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 dust-like precipitate at the bottom of the vessel, which mixes uniformly with the urine as in intermittent fevers. 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 in most inflamatory affections the sediments even when the urine is at rest, has some lines of thickness; and it is partially blended with the upper portions 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 we find to be the case in intermittent fevers.

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 the periodical 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 grave, and this is a correct inference. Our prognosis will be more unfavourable 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, are of bad augury. The delirious, comatose algid & choleric varieties are most calculated to excite the fear of the physician for the safety of his patient.

If there be great irritability of the stomach, by which a vomiting of the medicines administered is kept up, and persisting delirium with a small fluttering pulse, the prognosis is unfavourable. In some cases there is a decided disposition to muscular spasm, which interferes very materially with deglutition, and frequently prevents the retention of enemata in the rectum; 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 algid form of congestive fever. "Another striking symptom," says he, "in the collapse stage, is the great repugnance of the patient to any covering or any thing warm to the extremities." He will complain of intense heat of the extremities, when indeed if we examine them they are of icy-coldness, and bathed in a copious perspiration.

In forming a prognosis the physician must rely a great deal on his own tact and judgement, it will then be attended with uncertainty and disappointment.

The treatment of congestive intermittent, like that of common intermittent, naturally resolves itself into two kinds – that by which we relieve or mitigate the intensity of the paroxysm – and that which prevents its return. This fever bearing 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 indigestable or undigested food in the stomach which proves a source of irritation to that organ, evinced by retching &c. a mild emetic should be given, generally of ipecacuanha, 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 depression – indicated by shivering

cold, a feeble and frequent or intermitting pulse- oppressed breathing- and obtuseness of the intellect with thirst and internal heat, the remidies should be directed primarily to the nervous system, in its expansion on the mucous membrane and skin

To the latter of these surfaces we apply assiduous friction- stimulating embrocations- the warm water- or warm air- bath. To the mucous membrane apply cold water, by the mouth and per rectum, and then if reaction be hardy or imperfect, opium may be given. We must abstain from the diffusive stimulants in this stage which is one of irritation as well as of depression and not unfrequently inflamation conjoined.

When the causes of irritation to the mucous membrane of the alimentary canal have been removed, the sedative treatment to this surface, and counter-irritation will constitute the outlines of treatment.

Of the counter-irritants, sinapisms kept applied to,

or dried 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 laxative enema, until a free operation is procured. As the digestive mucous surface is highly irritated in this fever, [redacted] the agents required and much milder than those which would at first seem to be indicated. Simple tepid water, or salt and water of the same temperature, thrown up till there are free evacuations of fecal matter will often suffice.

After free evacuation, if the internal 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 lancet in the treatment of this fever, on the same principle that McIntosh 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 inflamation associated with fever." Bailly and others 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 were effects of a disturbed nervous system, says, "If therefore we had any means of acting on it in a definite

manner and control quo ad hoc 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 remedy, prior to the coming on and actual supervention of the alarming state of congestion which distinguishes the paroxysm in malignant double tertians or the congestive fevers 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 inculcated 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 interval morphine & quinine to prevent a recurrence.

Dr Fearn 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, Merriwether of Ala, Bouchelle of Miss. and Prof. Bowling of this school, have attested its value.

Dr Barbour (Am. Jour. Med. Sciences) applies, "as auxiliaries to the cold affusion," cups along the course of the spine - over the epigastrium - 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 flower.

Dr Merriwether (Western Lancet 1846) relies almost entirely on the cold dash for a solution of the paroxysm or the "collapse following the malignant intermittents 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, heat of the epigastrium and abdomen generally, and incessant thirst, the patient complaining of burning up internally, while at the same time his skin feel cold." After the cold effusion 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 expanded. Sometimes the cold sweat again make its appearance and with it the other unpleasant symptoms; when this is the case the cold dash must again be repeated. Dr Brownrether has sometimes had to resort to it four or five times during the twenty four hours.

Dr Bonchelle (Med. Lancet) says "I used the cold douche in collapse to arouse the system to reaction, which it will oftener do than any other means that I have ever seen essayed,

I have seen many patients as it were moribund— cold and clammy skin, thready pulse, sunken features, blue finger-nails and lips, great epigastric oppression and breathlessness, rescued from the grave 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 he "All purgatives, all stimulants internal or external; all irritants are injurious in congestive fever. So long as I pursued the plan of correcting the secretions, and of stimulating by brandy, camphor, Camphor and guiniy, ammonia, Jalap, &c. I lost patients, But when on the other hand, after much reflection I changed my pathology of the disease, and adopted the cold water and anodyne practice, my labours 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.