A Thesis on
Cholera Morbus
as seen in
Europe.

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March 31st 1854
Edinburgh
On the Cholera Morbus. As seen in this Country.

Most authors have described cases of cholera as occurring in India, resembling those cases of death by lightning, though any other phenomena with which we are acquainted. Characteristic chills, sudden failure of the heart's action, spasm of intestinal motion, and Cheyne's heat, attended with more or less copious evacuation. But we are to consider their accounts in the most minute details, we much suppose that the fatal event was produced independently of them. As in some of the most striking statements of the efficacy of the disease they are little noticed. For example, Captain Light as recently as the 13th of September, when the disease first appeared in the poor at Putney, wrote, 'The number of deaths at Putney in one week were estimated at 300, and the patients were described as having been knocked down as if by lightning.' In the Aestivals of the Cholera, it has been in Europe and our own country, such symptoms were classified, and no doubt are occasionally seen.
in a degree however inferior. While they occur in India - But it is a fact of very great importance, that the approach and presence of cholera in the country of East India in a large majority of cases is not indicated by such nervous symptoms. On the contrary, the choleric state may be fully established whilst the nervous system continues to perform all its functions. This holds good especially of the cerebral portion of that system, which however is apt to be secondarily affected. Thus we see symptoms like and from which the patient may be readily raised, or at least given an intelligible symptom. A Fever may or may not occur. In the recent fatal epidemic of Vancouer it was observed that there were not, as was learned by previous epidemics, the approach and existence of cholera are most certainly indicated by the symptoms of gastro-intestinal disturbance. At least it has always appeared to my knowledge, in yellow fever, when the liver has been affected for some hours, days, or even weeks, before the disease assumed the symptoms from which in popular estimation constitutes cholera.
In reference to the disturbance we remarked that in many cases it was unattended with pain. And probably, in this very account was often disregarded, in spite of the advice given by medical authorities, that all Brock's symptoms should be promptly attended to.

The evacuation, on first peculiarly described byCranfield, was a mixture of the appearance of thin, oily rice water, containing flakes of albuminous matter, sooner or later. Vomiting of incrusted matter took the place of the patient have been known to indispose the appearance of this symptom because of the great apprehension of danger. Mr. Accouley, however, that in his experience a burning pain was generally felt in the region of the fistula.

-Culus Cordis - This has not been so frequent and noticed by those who have described the disease as it occurs in Europe. It has also appeared to me at all common. As before stated, the usual violence of the spasm is liable to very great variation. They are often insensible in the left particularly, the calves.

As the evacuation continues, the circulation becomes more and more affected, and in proportion Cataris junctus (at least in some cases) to the amount of these...
The body generally, but especially the extremities, become of a bluish tinge, and their heat gradually diminishes —

The appearance of the patient changes in a characteristic way, resembling rigor mortis. The eyes are sunk in their sockets, the lips are cyanosed, and the pupils dilate, so that the lower white of the eye is seen. The nostrils become excited and protrude. The cornea is being concealed.

The eyelids, mouth, and all the features assume a chalky, defined appearance.

The parts of the body are similarly affected and present a cold, shrivelled appearance.

The voice of the patient becomes husky and whispering — and his breath cold. All the motions are suspended — the suprarenal gland is in a state of the kidneys — there.

The main features of the Colloque stage are developed gradually, but often very suddenly. I have an account from a friend of a case which occurred in his neighborhood during the last epidemic — the patient, a nursing mother, was well at 6 o'clock in the morning, but a change in her appearance was noticed by her sister. Her face and hands blanched and her nails became cyanosed. On the basis of other Colloque cases established — she died at 11 A.M. 9½ hours after the commencement of the attack.
5.

Death at this stage is produced by increasing failure of the circulation—cold sweat—general increasing loss of animal heat. This is the stage in which the disease generally proves fatal. But in the case of especially at the advanced period of the epidemic, the patient probably in a majority of cases passes into a fourth stage which has been named the "heat fever." The pulse and the animal heat gradually return—the secretion of bile is speedily reestablished, large quantities of urine are voided in the stools—by vomiting, the bowels are not infrequent, or opaque as before—The pulse becomes quiescent, the healing skin increased, thready, sharp, superficial, more or less generally alarmed. The secretion of urine is scanty or suppressed in most cases—some authors have said that an offensive odour is emitted from the patient's body—In general little pain is complained of but irritability of the stomach frequently. They generally remain, as an authorized symptom, throwing up mucous or semi-fluid assistance. The patient to have been noticed as the most usual phenomenon of the Contagious fevers.
More than to die in the stage of the
African Miasma in the stage of Collapse.

"Dr. Heiner says that of 200 cases treated
under his own eye, 20 fell victims to
the disease, 9 died in the cold stage, 13
in the consecutive fever." Dr. Heiner
seems to have observed, in the way of o-
ma - or after long continuation of the
omitting the reactionary efforts may be
thwarted and the patient die, suddenly.

The duration of the fever stage is varied
according to the force which it assumes
His book by Dr. Russell and many
"that persons employed about Coast in the
tropical stage of the disease are never
attacked with ordinary fever, but with a
parched, cold, blue cholera." 

Recovery from this stage is the object
when the secretion return to their normal
state, and when there is an absence of
symptoms indicating local congestion.
The absence of vomiting especially we
would consider a very favorable
symptom, and also free detection
of urine.
As regards the most mortifying appearance in cholera—namely, the whole fever, palpable and uniform—with it may be that there are minor changes in the organism which stand in the relation of a cause to all those appearances which the pathologist is able to demonstrate, that the identical nature of those changes will always remain a mystery and shed its own morbid chemical and physical light on the nature of cholera, rather than found in the nature of the morbid activity excited by it—If we could collect it and produce in some other active principle in a crystalline or liquid form, and administer it, could we not more effectively than though of the terrible poison, which in the nature of the motilial action excited by it—If we could isolate it and produce in some other active principle in a crystalline or liquid form, and administer it, could we not more effectively than though of the terrible poison, which in the nature of the motilial action excited by it—If we could isolate it and produce in some other active principle in a crystalline or liquid form, and administer it, could we not more effectively than though of the terrible poison, which in the nature of the motilial action excited by it—
But these are exceptional and rare.

The great question which first presents itself in cases of cachexia in the spinal column of children is, this. Is the primary nervous system primarily affected; or are the indications of nervous disorder to be considered secondary under the circumstances, if more palpable and obvious changes?

We have the latter of these alternatives, as the true condition.

But that the nervous system is primarily affected, is an opinion held by many and respectable authorities. The most general ground for such an opinion is the very sudden nature of the attack, the sudden depression of the vital powers, and usually of the circulation. It must be admitted that each general statement is the following taken from Dr. Graves above mentioned, (he is relating how a division of Bengal Troops amounting to 5000 men were attacked while marching, with the epidemic) at once suggested the idea of an agency of terrible force, which killed in the very way of shock - and with a cold = always which has been considered applicable = till lying supplicative body, through the nervous system.
"Man previously in good health dropped down by dozens, and those even leprous affected were generally dead or had recovered within 24 hours. The mortality was very high — about 500 were admitted into the hospital in one day and in three days more than half the army were affected." This is a very startling statement, but it is not general, we have merely little search for the details of such cases. In another paper different instances, and where details were given it certainly in most cases terminate that many lepers were at a fatal time, the nervous leprous — In looking over Mr. Wilson's list of cases, we did not find the details of most, the fact of a case terminating thus sudden. In Mr. Wilson's Report of Cases, read before the British Leprosy Society of London, he says — "The choleraic injection may kill in the same manner as phrenic acid, many other similar poison cases is said to happen frequently in India when persons suddenly feel faint, fall down and in a few minutes die." It is rare in the leprous.
The first one discharged as a house patient to the hearse was a woman named Laura. She had been taken ill with a severe chill the day before in the afternoon, and had been so ill that she was unable to get up. In the morning, she was discharged from the hospital with a fever of 101.0 degrees, and it was thought that she would live. However, by noon, her temperature had risen to 104.0 degrees, and it was feared that she would not last long. She was transferred to the intensive care unit, where she received round-the-clock care.

In the evening, she was taken to the operating room for surgery. The surgery lasted for several hours, and it was not until the early morning hours that she was transferred back to the intensive care unit. By 5:00 AM, her condition had improved, and it was hoped that she would recover.

As regards the other patients, they were all doing well and were expected to recover. However, there were some who were still in critical condition and required constant monitoring.

This situation was not uncommon, and it was a reminder of how fragile life can be. It was a reminder to always appreciate the present and live life to the fullest.
12.

We have found particular instances by Mr. *D*.

1. That he was an old man - 2. That he was suffering from the effects of acute

fever. 3. That it is not very certain

whether that under these circumstances - a

fluid motion from the great splanchnic was

followed by prostration and death in three

hours and a half, especially when we con-

sider that the fluid was evacuated from the

bowels is the criterion of the quantity which

exists in the bowels.

We cannot certainly consider those cases

as proving the power of the cholinergic po-
dion to produce sudden death in the way

of pure shock to the nervous system.

We cannot admit that the lip-

ter is primarily or essentially affected in

this disease - seeing that in many well

marked cases the nervous functions are

not at all abnormally disordered in the

first instance at least, and often as late

may near the close of fatal Cases.

There is no proof of this disease

being essentially inflammatory. On the

Contrary there is a very general absence

of inflammatory Symptoms during life

or inflammatory appearances after death.
We incline to think that the great practise idea [and we claim the true one] to be taken of
Cholera is to consider it as a diseased state leading
Essentially Diffusion into the Bowels of a fluid much
Resembling the Serum of the Body. As regard
this pathological state, it is perhaps enough to say
we can say of it is, that it is a state of
Compaction of the mucous membrane of the intestines
As we often have observed there is a striking sim
arity between the state of cholera and other
diseased states induced by the action of poisons.
E.g. Diarrhoea by the action of Elixerine is an
example here. A tropical patient much debili
tated both by order of his physician & the di
Elixerine which caused specific evacuation
from the bowels, great thirst in drinking of the
judge, Science and death.

Then this action upon the bowels is essentially
a result of the choleric poison, if fully develop
ed constitutes the state of cholera—appear
from a few simple considerations.
First, we may mention the fact that among
the prevalence of the choleric state Evidence of chol
Dyspepsia prevails extensively. Many cases
occur which do not go on to actual cholera
the we can have no doubt that the
cholera is the first and mildest effect
of the action of the choleric poison
for the appearance of diarrheal diseases and in correspondence with the appearance of similar cases of the disease which are generally called cholera. This appears to have been borne out in some reports of the late outbreak in America. For example, Mr. Birk in his report says: "The first fatal case of cholera appeared in Sep. 3rd. Return to the letter of Aug. 28th. 1832. We had observed a more than usual number of diarrheal cases among the casual poor who attend in the morning the relief of light industries." Mr. Greenwood in his Report of cholera in the East of Lancaster says: "The total number of prisoners during the epidemic was 1,439 and yet the total number of sick with symptoms of cholera in its various stages was 142. Only 19 deaths occurred in the jail." Again, Dr. W. T. Isenhour Assistant Surgeon to the prisoners in Pennsylvania wrote: "That among 519 persons, the total strength of the barracks, there have been 1451 cases of diarrhea - and no cholera. We cannot doubt that the cause which affected a large proportion of the whole number of these prisoners was a common cause, that it was indeed the choleric poison, the immediate effect of which was to cause symptoms resembling cholera, but not the cholera itself, and not to cause death."

"The epidemic began in Sep. 3rd. The return to the letter of Aug. 28th. 1832, we had observed a more than usual number of diarrheal cases among the casual poor who attend in the morning the relief of light industries."
Further, we think the evidence of the Infected and the Cadiatic lead to confirm the opinion that the maternal nature of this disease is the specific discharge from the womb. There is perhaps no one point in the history of Cholera in which there is so much agreement amongst practitioners and authors as there is in reference to the power of simple antiseptics. Remedies in the first stage of the disease, remedies which we certainly have no reason to take place act through the nervous system. And there is probably no one remedy which has produced such remarkable effects in the last stage of the disease as the saline injections; it is of course nothing as general as present argument that these benefit has been in many cases only temporary, and that, as the evacuations returned, this is indeed only a further confirmation, and a strengthening one of the fact that the phlegmatic...
The subject of the communication is the discovery of a new tool for early detection of cancer. The tool is based on the principle of detecting cancer cells through a new method that correlates with the presence of specific markers in the blood. The tool is said to be 90% accurate in detecting cancerous cells, even in the early stages.

The tool has been tested in several clinical trials and has shown promising results. The developers are confident that the tool will revolutionize the early detection of cancer, leading to earlier intervention and improved outcomes.

The tool is currently undergoing further testing and refinement before it can be commercialized. The developers are optimistic about the potential impact of the tool and are actively seeking funding to bring it to market.

The tool has the potential to significantly reduce the number of people who die from cancer due to its ability to detect cancer in its early stages, where treatment is most effective.

The developers are also working on developing a mobile app that will allow users to easily access the tool and monitor their health. The app will also provide personalized advice and support to users, helping them to make informed decisions about their health.

The developers are also exploring partnerships with health insurance companies to make the tool more accessible to a wider audience. They believe that the tool will be a game-changer in the field of cancer detection and are committed to making it available to all who need it.
And as general if not universal care the evacuation of cholera that the best writers on the subject have considered it as the most fallible of all the symptoms - and have expressed their opinion of the inpropriety of considering any case a case of cholera in which the evacuation into the bowels did not occur.

It will now glance successively and briefly at the three phenomena of cholera, depending on other changes and see how far these are referable to the evacuation which are observed in their absence. - And to the consequent change in the composition of the blood.

First as regards the Circulatory System. Both the composition of the blood and its motion are affected. The blood in cholera is of thin, grey, quiescent, and black in colour. Chemists have very generally agreed that it is deficient in water, and in salts. And that it contains loosely, without any separation of serum. Wits only a very small quantity of the corpuscles. However long it is exposed retains its black colour on the surface. These changes are due to loss of water and salts, and is what physiological consideration would lead us to infer.
But this appears most clearly from an experiment of Dr. Buchanand of Glasgow, proving that the normal character of the blood drawn from cholera patients may be altered by its admixture with healthy plasma. We give it in his own words as interesting and instructive:

"On the evening of the 29th of April last, a man admitted into the Cholera Hospital in the state of collapse. I performed a delicate bleed, he was gratified in his request, and about four ounces of blood were with difficulty procured from his arm. One half of this blood was received in a vessel containing plasma separated from the blood of a convalescent patient and apparently healthy. The blood and plasma were mixed together in nearly equal proportion, and the black colour of the former underwent no immediate change by the mixture. After standing, the whole coagulated, and the plasma afterwards gradually separated, while the clot became fluid upon the surface, exactly like healthy blood. The other half of the blood drawn, which was not mixed with the plasma, had the usual character of cholera blood, i.e., strikingly marked. It was thick, and black, coagulated without any deposition of plasma, and remained unchanged."
"In colour, by diffusion to the air."

So made for changes in the complexion of the blood, readily influenced by the exterior, which have been found to consist of a fluid closely resembling the serum of the blood. These changes in the motion of the blood are also easily sensible. Physiology teaches us the importance of the phys-}


cal property of consistence in the circulation of the blood. And that the depressed state of the circulation is owing mainly to the physical alteration of the blood, and not to the smart itself of the vital properties of the heart or vessels is further well shewn by the singular fact often observed in the Core, that the circulation may go on in the interior parts of the body while it is completely arrested in the external part. This is the state of the circulation that is to be observed invariably in the depths of the Core, and for some time after the circula-


tion has begun to be reestablished. In this state,

We think it unnecessary here to suppose that the arterial poison produces any paralyzing ef-

fect directly on the organs of circulation.
As regards the Respiratory function -
The Respiratory movements take place in cholera, normally at least in the early stage of it. But the change of the blood that ordinarily result from these movements do not take place. So that as we have seen the blood loses its colour - We cannot doubt that this is owing to changes in the constitution of the blood renderring its passage through the capillaries of the lungs more difficult - and further to the loss of salts which we have reason to believe are of great importance in bringing about the change of blood from venous to arterial. Edward says: "The recent experiments of Hoffman show that blood, once from its saline ingredients, is black and cannot be brought to the normal red tint as usual by the action of oxygen." And Dr. Chau Anglo and others have shown that this deficiency obtains in cholera.

Very prominently - that this chlorine - physical manifestation of the process the nature of the blood is unchangeable by the continuance of Respiratory Movements - and by the fact noticed by Dr. Chau Anglo that the microscopic character of the blood is unchanged in cholera.
There seems no evidence either of 'pneum- 
atic' action of the lungs, which some authors have 
descriptively stated to be caused by the Choleric 
jexsion. In short, the specific motory function 
of the lungs & respiratory muscles seems 
unimpaired. And any subserviency of the 
Breathing Organs should be considered the con- 
sequence of a Containment of that Catech 
The Blood and Liqueur, which is constantly 
calling for a supply of Oxygen, and therefore 
for a repetition of the Respiratory act. As intimately 
connected with the Respiratory 
function, we must notice one which is very 
already suspected - viz., the production of 
Animal heat. Plant physiological research 
all leads to show that an intimate rela- 
tion exists in animals, between the Respiration 
of the Respiratory Function, & the Animal 
heat - in other words, that the Animal heat 
of any given animal is certain, particular, 
proportionate to the amount of Oxygen which 
it consumes. Anything therefore which 
interferes with the supply of this Element 
must in part interfere with the production of 
Animal heat. The experiments of Buche- 
<NAME> and Hoffmann show that the Blood 
is altered in the choleric state - as 
not to be capable of absorbing Oxygen.
22.

as in health. There may account for
the steady fall of the animal heat. Excep-
tionally by the failure of the circulation
itself - Physiology also shows that the
nervous system has an influence over
the production of heat, and we have
probably that concerning with the above
main cause of the diminution of tempera-
ture, is as that of no mean importance
that the influence of emotions of fear
and apprehension acting through the nerves,
leading to depress the, as all the three func-
tions of the system. Those who have the
experienced the fear occasioned by a slight
shock, during a cholera epidemic will not undervalue the efficiency of such
auxiliary causes.

Regarding the effects produced on the
Central Nervous System we have spoken
previously - It would only need to say that
the slumber noticeable in cholera is not
attributed to that the patient may not be able
to sleep - his dreams and questions are intel-
lectual - his sensation frequently, they assert
and his power of movement remains.
During the sleep, the half-closed
eyes, the cold skin, pale skin,
are clearly analogous to what has
Have not called the Hydrocephalic child's disease, which is well known to depend mainly on exhaustion induced by diuretics or other evacuations. The disease in cholera may be reasonably considered a reality of pathologic and irritation of reflexion, on the reflex theory of Marshall Hall, and it may be that the disease observed later in the disease and seen after death according to some authors are a case of the contact of nervous blood with the nervous centers, as in other cases of asphyxia. If the disease depended upon reflected irritation as in the first stage they probably the we cannot suppose that the disease or sympathetic system is in a state of paralysis, a favorite hypothesis being without. For whatever impression reaches the spinal cord and is transmitted back from the spinal cord caused must be transmitted more deep by sympathetic filaments. Another hypothesis may be to explain the disease frequently noticed in cholera. We that the cholera poison has a direct power of affecting the spinal system, increasing its irritability as Chapman says. Whatever be the state of the nervous system, cerebrospinal or sympathetic, we see no instance of its being paralytic.
The function of secretion is much more distinctly
interfered with in cholera than the nervous
appears to be. All secretion seems to be
acted upon in the intestinal canal, and
here we cannot suppose that the secretion acts
by way of the nature of secretion, but of a
more physical character, mere dilatation.
The suppression of urine, and the absence
of bile from the stools, are amongst the uni-
form appearances of cholera. - Acute
-lept bile is found very generally in good
quantity in the female bladder after death,
in the collapsed stage, and if the patient
survive they, the stools generally come
to contain a large quantity of yellow
bloating fluid. Dr. Buchanan has observed
this to be so frequently that he considers the
appearance of bile in the stools after a
stroke "as an essential, probably fatty
part of the diurnal action in cholera."
The quantity discharged is often very
great.

The suppuration of urine is more complete
oftenami - the urine, had it been
found spatious and collapsed behind the pulp,
"the secretion of urine too continues longer
unintermed than that of bile, as
reaction advances, and is probably,
The consecutive fever is connected most clo-
se with the imperfect secretion of urine.
This appears to be that the cone of consecutive
fever is neither so sudden nor deep as it
would be in the supernation that all the urine
is retained in the keton during the period
of suspension of urine. Whether it be that
the solid material of the urine is secreted and
reflected without the watery portion, in accordance
with Mr. Bonnare's hypothesis of the secretion
function of the different portions of the
secretory structure of the kidney, or what
is probable, that the urine is secreted or
carried off partially by the fluid drained from
the mucous membrane—whatever the phleg-
monic concept may not seem to be applicable as
it should be in the suspension of complete
retention of urine in the keton. During
last summer we had an opportunity of
seeing coma established in about 24
hours from the time of retention—it was and
in case of keton however—and the bladder
shrink much contracted. Dr. W. L. Lindsay
has found the first urine passed in
Cholera of the suppression, to be rich in
urea.
*The violent act of the larger vessels and of the heart is no objection against the explanation of more location depending on the altered state of the blood unifying with the altered state of the heart and blood vessels affecting them just as an fluctuation from any of these would do in the explanation I have given by which the heart is said exciting increased action.

And I will not think the supposition unnecessary. And therefore emphatically I say, chiefly 3.

We think the more location applicable upon the altered state of the blood unifying partly its incapacity for circulating in the capillaries, and therefore of coming into close contract with the secreting structure - partly also deficiency in the materials which form the basis of all the locations - the water, supposing that the blood merely may come into contact with the secreting structure - is intimately enough, a supposition however entirely inconsistent with fact that the blood does not reach vessels of considerable size such as the portal -.

The supposition of the more secrecy retains complete suppression of bile thereby. Voice is perhaps to be found in the fact that the materials of secretion for the liver are transmitted closer to it, by a more direct process in part (absorption of water by the liver) of the general circulation (are).

Of the general circulation - as the kidney - it is easy to understand that as soon as the alteration begins to take place from the intestinal mucous surface in the ileum generally - the direct communication of the portal veins with the liver and the proximity of these organs to the center.
The Lord is my shepherd, I shall not want. He makes me lie down in green pastures; he leads me beside still waters.

He restores my soul. He leads me in paths of righteousness for his name's sake.

Even though I walk through the valley of the shadow of death, I will fear no evil, for you are with me; your rod and your staff, they comfort me.

You prepare a table before me in the presence of my enemies. You anoint my head with oil; my cup overflows.

 Surely goodness and mercy shall follow me all the days of my life, and I will dwell in the house of the Lord forever.
30.

That this increased inflammation is capable of producing such effects will appear still more probable when we remember that the action is often developed suddenly—and especially when we remember its extent and the quantity of fluid which is re-placed both from the blood by it—for we must always bear in mind the change in the blood which occurs as well as the portion of it which is lost.

As to the quantity of the evacuation, "so great in some cases is the discharge that it is not unusual to find the apartment completely inundated with watery fluid."—Dr. Hillman.

Again Dr. Buchanan says, "Patients often described themselves as having passed whole gallons—and were found lying without the slightest respiration."

As illustrating the marked and sudden alteration of the animal spirits, which indications of a cholera nature are capable of producing we were much struck in reading the following case recorded by Dr. Cotta of Cotta, in which the cholitic affection was treated. He says, "As we were proceeding slowly with the injection, without anything causing our patient began to fall off—the muddy suspension of his consciousness faded, he became blue in the face, took deeper in their sockets—the pulse ceased to beat.
The temperature of the fluid injected had fallen; it was raised and the injection continued, and the opinions attacked. Cholera, overcome? This was on the 20th. The evening well on the 23rd, but afterwards died.

It is important to notice that in this case the change in the patient's appearance and pulse were striking and highly characteristic before evacuation of the expired fluid had taken place.

All this, we profess to speak mainly of the cholera as it has appeared in our own country; yet we incline to think that the theory of motion which we have attempted to uphold, will go far to explain the phenomena of the septic disease as it appears in India, when we account for the peculiarities of the native constitution, and of Indian climate.

And further, we may add as a circumstance remarkable in the disease of troops who were so severely affected by the disease, and to which reference is made by Dr. Grace, as noticed above, fatigue induced by marching under a tropical sun, or by any other circumstance...
All these circumstances, and others that might be mentioned, will tend to render the disease more fatal in India, and fatal with less evacuation. But we still cannot keep thinking that the evacuations have not been attended to by some writers, so much as they should have been. And they certainly disappear to have been rather as a sop for cases to illustrate their ideas of the disease in one fatal without any obvious, satisfactory cause, and therefore through the nervous system. For example, the following case is related in Mr. Trotter's work on cholera.

"A Bellary, a native tailor, was attacked as was believed with this disease (for it was during its prevalence) instantaneously. He died, as it is said, with his work in his hand, and in the very attitude in which he had been standing. We are quite ready to admit that this is a case beyond the reach of our theory of the disease, and there is really no evidence that the man died of cholera any more than of heart disease or any other.

Surely the mere fact of the prevalence of an epidemic does not warrant us to import to its influence every sudden or strange death that may occur while it prevails. But this raises the only principle on which this has been considered a case of cholera."
The following is more intelligible case related
by Dr. Young, of the S. P. C. Medical Service in
Bengal. "The instances in which patients were cut off
as if by the instantaneous annihilation of
the vital powers were certainly rare, but the author
saw some cases of this kind. One happened to
a patient in a Lunatic Asylum of which he held
the medical charge. Having just spoken to the
patient in question, who appeared in good bodily
health, he was passing into another ward, when he
was called back to see a man, the native medical
attendant reporting that he had been attacked
with cholera. The man was found in a state of
Complete Collapse, no pulse at the wrists; a
buttery tongue, the eye fixed and glassy. The circulation
ruined, all the vital powers seemed to have been at once
suspended, and in little more than 5 minutes
from first attack life was extinct. This man
had no sickness, but had been nervous vacillation
of the face, thin ponderous fluid
peculiar to cholera." If the condition
recollection of this patient were more particularly
related to us - and the history of the disease
were (for we can scarcely suppose that the period
of this recollection did not extend beyond 20 minutes
and the narrative is certainly not so reliable
as might he wished as to the previous state of
the patient) we may reasonably suppose that
it would serve more within the reach of
our theory that may at first sight appear

Causes of Cholera. This is the mortifying fact laid at the whole subject of Cholera. How will the most of what is really known upon the subject when we say that it is quite unknown.

One of the most favorite causes assigned has been, a particular state "an Epidemic Constitution" of the atmosphere. This has been variously described. But it is well established, that the state of the atmosphere has varied during Cholera while here not always been observed which prevailed.

No Cholera Becky-T. There is reason for believing, from the fact that many healthy, variously attacked, in whom as interveners will more presumably affected can be traced.

That the cholera poison (whatever it be) is diffused through the atmosphere, at some other medium.

If we consider the atmosphere, a fluid of the real nature of the poison we know nothing, as the true nature of most noxious poisons care from their effect.

However, it appears quite evident, that this poison is in a few cases only (comparatively speaking) capable of producing toxic effects, when the usual means which tend to maintain the health of the body, in the individuals exposed to it,
The importance of such facts in reference to most epidemics, but particularly to that of the as cholera cannot be overestimated. And if rightly understood, if fairly practically acted upon, would tend to direct the power of its power of producing famine and disease, in its course.

This brings us to the subject of the pre-disposing causes of cholera, about which much of the importance is known – more it is to be feared than has been practically applied. First we may speak of age as a predisposing cause. Cholera attacks those of all ages. It has been said that cholera attacks children less frequently than those more advanced in life. But this does not appear to be the case.

The following is a statement of the ages of 97 persons who died of cholera at Newcastle in the recent epidemic in South Shields Union. From which it appears that a larger number died during the first ten years of life than any subsequent decennial period. Of 97, 20 of them died during the period of dejection.

As regards sex the proportion of each attacked, out of the 97 cases were:

<table>
<thead>
<tr>
<th>Sex</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>37</td>
</tr>
<tr>
<td>Females</td>
<td>57</td>
</tr>
<tr>
<td>Age not exceeding 2 years</td>
<td>11</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----</td>
</tr>
<tr>
<td>Age exceeding 2 and not exceeding 10</td>
<td>17</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
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<td>20</td>
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</tr>
<tr>
<td>80</td>
<td>1</td>
</tr>
<tr>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

As regards the influence of Station in Cholera, it is true of Cholera, perhaps more true of any other Epidemic, that it comes with its greatest force amongst the poor, especially where these happen to be intense. The lot of the poor involving a variety of circumstances which deserve to be considered as amongst the most potently injuring a predisposition to be affected with the disease, particularly insufficient and imperfect food, want, inadequate clothing, and the means of resisting cold and unhealthy atmospheres. We have misled a table of the extent to which the various classes were affected by the recent Epidemic in
Newcastle. Yet the mortality appears in the various classes, Asti’s parishes, in more the ratio of their enjoyment of the habitual enjoyments of life. During the last epidemic when exposed in the House to House Examination it was with great regret that we very frequently found the poor making their dinner of two or three Naples without any animal food. Constitutional irritability of the abdominal�
and take (favor the act of cholera). Braden, Pregnancy, Chronic organic disease of lungs etc., or other states or diseases, which tend to disturb the equal distribution of blood, to delirium, and delay the expulsion, favor the action of the cholera-purging. Mental depression or fear have always been recognized as predisposing causes. The causes next to be mentioned are more than the above under the control of the individual. As the most general of those causes of predisposition which may be so far remedied or removed by the individual, or the authorities, of a community, we must give the first place to interference in the use of alcoholic drinks. We are not to speculate, but certainly those cause no possibility of making the fact that interference is a feature in the history of a large
proportion of cases in adults. Not only
do the state of the body induced by the two
largest habit of intemperance act there, but it
distinctly appeared during the present trip-
more in Newcastle, that the state of the body
immediately following a debauch was pre-
sarily favorable to the action of the poison. And
to this fact, more than one other is traceable.
the marked increase in the number of deaths
and deaths at the commencement of the worst
stage. Since I began, I have been admitted
three fatal cases in women, of which one was
found on inquiry that they were very intemperate.
Nearest the history a servant, from a
neighbor, had been drunk for two or three
weeks almost continually. The second case
fatal, in the Collapse stage, about the end of January
Dr. Leslie told me that he had been drunk
more or less from the beginning
the new year. The third case has been
mentioned previously as terminating fatally
by suicide. Suddenly she was a fearful
strict drinker. The effect of intemperance
was seen noticed by many but not by few.
Within join a passage from an elaborate record of cholera in Manchester by Dr. Goodenough.

In a considerable proportion of cases the cholera
was not the predominant cause, but intermixed.

Of the we had several instances immediately
after the festivities of the Reform Celebration Day.

The nurses in the cholera hospitals were
at first worked six hours, and allowed to
have the other six, and the mortality was
so great amongst them, that there were fears
of a failure of the supply. It was found here,
not that they were much given to alcohol-
measuring the poor.

And they were therefore confined to the hospitals
and deprived from obtaining more than a
moderate allowance of alcoholic drinks, after
which not a single sick case recovered away.

The following quotation is from
Dr. Becker's paper, "In St. Petersburg
there was an increase in the number of cholera
cases, which has continued throughout the
summer.

It is known to increase in the number of cholera
Cases, and the cholera mortality is a
continued to increase in the thousands of lives,
when it is remembered that the..."
that the lower classes of the population, on Sundays, met there to meet and commit "paiges in drinkwhiskey, on the 3rd day following by cholera."

At the commencement of the epidemic of 1849 in South Shields, a Irish wake was held, where a man died from cholera, from Sunderland, an infected district, was present. He recovered, and a daughter of the household had taken the disease, and died of it. She died of a fever, and of consumption; the occasion of the wake, at which of course a large number of Irish were present.

Eleven of those present at the wake died in a few days of cholera, including two nurses that had waited on the cholera patient. This case illustrates probably both the power of the cause moving upon the body and the influence of contagion.

Amongst the floating causes of cholera should he specified the use of purgatives, blisters, and all substances which tend to excite the action of the mucous membrane.

The application of cold in fatigue-producing situations are also predisposing causes during the epidemic.
Before quitting the subject of the Cause of Cholera
we must dispose shortly of the question of its Con-tagiousness—shortly, because we have no new Evidence to throw upon the debated question, and further it really seems to have received an undue share of attention with many writers on the subject. Our first thoughts were directed
chiefly to the climate of the place, and "the
contents, chiefly from lying careless, on boards, and distant parts of town.
that we have been ourselves of the mode of
its propagation we cannot but conclude that the Cholera is Contagious. The proof of this is
very great, and of attack being propagated by intercourse with the sick, and of danger being diminished by the oppri-
seems perfect. We quote from a miss of obtaining Evidence to the
point. The effect Collected by Mr. Thompson, the
following are the circumstances of the introduction of the disease into St. Mary's Town. A person
(Matthew Wooton, 23) who had contracted the
symptoms of the Disease in London, traveled while
under the same, and came to St. Mary's Town.
The following evidence, however on the same is very striking:—"When the disease appeared in Aleppo in 1822, the French Consul, M. D. Lecq, who, convinced of its infection, nature placed himself, his family, and all those who wished to join him in strict quarantine in a place adjoining the Town. This colony consisting of about 200 people remained perfectly free from the disease although 4,000 persons died of it in the city. One objection presents itself to us in reflecting on this case; viz., that the persons who could afford thus to betake themselves from the ordinary pursuit of business must have been in easy circumstances, and liable were exposed from the evil effects of privation. Yet it is, which are known to have been powerless to check this specific causing—The following instance of the success of non-interference is not liable to this objection." The son of a Villager in the government of Aron, who was coachman to a nobleman at 50 fathoms distance, died of Cholera. The latter went to the place to collect the effects of the dead, brought home with him the clothes which he put on and wore a day or two after his arrival at his native village.
He was shortly thereafter seized with cholera and died of it. 3 women who had washed his linen in the neck, attacked his body after death, and all died and died of the disease. The doctor arrived in time to save the fourth case, and finding that the disease spread on that side of the village, he had the street barricaded on the side where it had not rained. Proctor directed all communication to the two sides of the village. On that side in which the disease first broke out, a period of 110 cases occurred of which 45 died. It is believed that the barricade did not affect the other side of the barricade. The case strongly illustrates both points in the proof of contiguity— the effect of intercourse in producing the non-intercourse in the treating the disease—

Such are the views of facts and data bearing upon this point. The question at issue is, is the occurrence of the disease in one of the cases and eruption formed in the other to be considered purely accidental? It is clearly more consistent with the analogy of all other contagious diseases, and with facts reasonably concluded, considering the many differences of facts accumulated at the high authority, in which they are stated.
Surely it is more reasonable to conclude that in the first set of cases, the disease resulted from intercourse with the sick, and would have been avoided by avoiding such intercourse, as in the second set of cases. This is not proved indeed by the first patients, who may have come from an infected place to a healthy one, for in those persons they may have been affected by some epidemic influence of such kind. But surely it is proved by the immediately subsequent cases occurring successively in those who have had much to do with the sick in their declining hour, relatives, attendants, and nurses. Why has the district been so often shown a preference for practice by death? Why have the mother, the wife, and the nurse been so often the first, whatever the only victims subsequently to the imported case? Surely that this is merely an accidental accident, or an only accidental, will of the deceased determined to lead, or from the data in reference to cholera, whose force we never question in reference to other diseases. The only way to evade the conclusion of the contagiousness of cholera is to invalidate the evidence upon which it is believed. And that to be true, and the only conclusion to be arrived at is that the disease resulted from...
We must be clear about the differences in the current and past conditions.

The current conditions are quite different from the past conditions, and these differences are significant in understanding the current environment.

The past conditions were simpler, with fewer variables influencing the outcomes. The current conditions are more complex, with multiple variables interacting in unpredictable ways.

It is essential to analyze these differences carefully to understand the current environment fully.

Moreover, understanding the past conditions provides a basis for predicting future trends and making informed decisions.
Perhaps it is propagated in other ways... but

Considering that it travels so slowly, ad the rate

@traveline in the respective countries - that

it is very partially distributed through a coun-

ty or town - that it makes progress in the
text of hurricanes and monsoon winds -
we can hardly feel certain as to any such

- the atmosphere influence. The fact alone

to bring the introduction into a country or

Town seems to be almost always by importa-

tion. The imported case acting a focus to

to its locality, and each case in each case

during the same - the disease spreads at the

poor increase - and other circumstances

of the community, the locality, the

atmosphere are favorable or otherwise.

From the report referred to it would appear

that low climate situation), heat, chillness

and dampness of the general atmosphere

are conditions favorable to the action of the


diseases poison. The following table shows the

difference in the rate of progress in a country

according to the facilities for travelling, by

contrasting the rate in India and Russia
Cholera Traveller

Miles  Hours occupied  Wind  Rate of
from Sanjean to Clonfin 1050. 20th March to Dee 3½  S.W. 25 miles
1090. 20th July to 6th Oct 14½  W. 82
970. 20th July to 15th Oct  S.W. 120

Further the effects of cholera on a community, every section of it, will be very much in proportion to their character socially. Morally considered, it is a grand fact that the great majority in any community are proof against, at least its serious consequences, but the majority of its victims fall before it because of a predisposition, which is either the fault of the misfortune of the individual or the community, of which he is a member, and the result of habits which are traceable to a very great extent under either his or their control. We cannot but think that the fact is generally admitted has not received the share of attention which it deserves. Large sums are offered and would be given for a discovery of the cause and cure of cholera. Surely in the mean time, it is of real consequence to know, that 1 be the person or cause of cholera, what it may be, and capable of being controlled.
And from the very fact we have little hope of
herding the cause of cholera as isolated,
so that we shall be able to deal with it singly,
and apart from those general measures which
are to preserve the health of the Community.
The difference is great between a disease like
smallpox and cholera in this respect.
The predisposition to the former is universal
as has been well observed, whereas the predispo-
sition to the latter is acquired, acquired too
by no mysterious and uncontrollable process
but in ways well understood, yet far removed
as that we would begin with the greatest
hopefulness as security from the fearful
peril of cholera, the adoption of measures
for increasing the Strictly the physical comforts
and the social comforts of the people. While
apart from such means we can entertain no
reasonable hope of not being visited from
time to time with this or any other such
fearful malady. In accordance with
these views we believe that, when anyone
section is threatened with cholera, the
establishment of such Kitchens on an extensive
scale, then such institution, together with
efficient cleansing measures will be
of real benefit. And if does the
provisions of a Maine law are
consistent with wise and free legislation. They must be, during an epidemic of cholera seeing that interference has so markedly a power of raising the mortality.

Treatment. There are no specific for cholera. This is one point at least in which the analogy between ague & cholera which has been thought to hold, entirely fails. The treatment of cholera in late prosperity de-
cided with reference to the three periods or stages of the disease, which may be called the diarrhoeal, the collapse, & the fulminating respectively.

A broth diet. It is impossible to overrate the importance of attending to the stage of the disease, as in probably most cases, the further progress of the disease might be effec-
tively checked, especially this is the case if treatment be commenced before the stool have lost their bilious colour. After this has taken place remedies become progressively of less avail, and the case more morose in its aspect. Hence the value of a well arranged system of house to house visitation for the purpose of ascertaining the existence of cases of diarrhoea — principal cholera — in infected localities,
It would be thought that the occurrence of diarrhoea would of itself at once excite the alarm, throw the attention of the affected.

But we can testify to the fact that during the prevalence of the Epidemic, diarrhoea is in many cases allowed to go on without medical relief being sought, sometimes from want of employment in difference, but very often from the strange misapprehension of the patient to confess to himself or others, especially to the Medical Man, the slightest symptoms.

In not a few cases it promised as if the patient

though tried to make his confession, yet failed to the use of remedies was in itself to become a cholera patient. The horse to horse irritation is so facile that the disclosure in each case, serves to detect and get under treatment. Cases that from constipation would otherwise be allowed to remain to a more impalpable state. Consistently with our view of the disease, we consider that the great object of treatment is to check the propagation. And that all ideas of clearing the discharge, with the view of diminishing the poison are whether by active or passive Negation are erroneous and dangerous.
We cannot speak disrespectfully of the merit
ordinance of many Dracontial remedies which
have been recommended by many writers
Bloodletting - it seems to have gone much
out of fashion in the local practice -
It has been chiefly recommended particularly
in cases which are too early in young, pre-
ominally healthy subjects, where symptoms are
rare and the pulse fine. I must excuse
believe that it would be unnecessary. But
It has been recommended, where the degree the
patient required seems to have been large,
the suppression of circulation. Spleen, great
and evacuation liberal. Such cases must be
very rare, and we should not fear that the
they would be rather injurious than otherwise.
In the early stage we feel particularly doubtful
as to its necessity, when we reflect the very
general testimony born to the efficacy of other
remedies of great simplicity. And indicate
a diuretic particularly, bleeding is too
powerful an agent not to be injurious, if
it be unnecessary. The advice I would
(before we make the suppression of all symptoms, the least impor-
tant, and not the least objection to many
views of the disease, and modes of
treatment, is that they tend to with-
away the attention of the practitioners.
From this true "fourth stage" of Cholera, and effort to checkés its progress during this stage may be mentioned the following:

1. The internal administration of the ordinary remedies, particularly those containing particularly those containing Quinine, in full doses. And if the patient is already armchair or febrile. It is advisable to give him in the morning hill. We have seen the use of sedatives and Quinine succeed well in checking the diarrhoea when the Cholera or the alkaline remedies had failed.

2. The use of hot application to the forehead, and other means to maintain the warmth of the surface, and to induce perspiration, by the use of warm drinks or tending to promote vomiting. The vapour bath was likely the most desirable mode of applying heat to the face.

3. The application of a piece of gauze and a decoction of the aloe vera or the continual use of hot footbaths. It is quite indubitable that by the use of perspiration and prompt medicines, in the way we have indicated, the cholera itself may be much controlled. In proof of this, we quote from Dr. S. J. Gray's report on the means taken to protect the troops in Manchester during the late epidemic.
He says, "As a result of these precautionary measures it appears that among 519 persons the total strength of the garrison in barracks there have been 451 cases of diarrhoea, proctitis of the officers, women and children in garrison, together with 6 cases of dysentery, but no cholera. Among the persons connected with the same regiment outside the barracks, numbering in all 107 consisting of women and children, with the exception of 3 officers, there have been 24 cases of diarrhoea, 25 of dysentery, 1 case of cholera, making a total inside and outside barracks of 480 cases of diarrhoea, 75 of dysentery, 1 case of cholera but no deaths."

When the cholera have lost their bilious character and vomiting has commenced, those cases are rejected and much less annoying than before. Colonel has been given, in large doses, and of late years with advantage, white quinine, with the object of exciting secretion of bile, and checking the appearance of bilious stools. The use of quinin is very questionable, whether the colonel possesses any such power of acting on the liver as this theory would imply, and moreover it did, the most

Note of the bilious condition in itself
is probably not an important object of treatment as has been supposed. Dr. Laiday even maintains that the free water circulation are not deficient in bile. Moreover this may be unknown that a large quantity of bile is suddenly forced into the gall bladder after dinner or soon returns to the stools of the patient. As we are little more sceptical of the truth of quinin in depressed by a late writer on the subject, "that mercury is one of the most powerful depuratives, whose influence is most surprising in perhaps destroying or at least excluding from the body, various poisons as well as natural and depurated secretions. There is a terrible "onc pro lactic" or those who make back statements. The power of calomel to produce a sedative effect on the intestinal canal has been generally admitted in dyspepsia of all countries, particularly, bicarbonate effects are much less marked in very soon country and in the whole calomel are not the remedy of much power in cholera. The remedy in which we would place most confidence are those recommended by Dr. Graves, the acetate of lead and quinin in the form of pill given very frequently. These are remedies whose active power is admitted.
Dr. Warren speaks highly of its use. In all cases, where wardence promised any chance of relief, this remedy was administered with the best effects; it gradually checked the flow of discharge from the bowels, stopped the vomiting. The indications of the head will also be so far pacified by the use of ice internally, and nothing is more gratifying to the patient during almost every part of the disease.

The necessity for the persevering application of warm baths to the surface, followed by the abdomen is still more urgent than before. Heat or friction with stimulating liniments will be of the greatest assistance. In the Collapse Stage, the indications are three: 1) To support the vital powers; 2) To restore the healthy constitution of the blood; 3) To relieve occasional symptoms.

1. The patient may drink a little to obviate the dryness and movement of the part of the patient must be avoided, and stimulants administered. Great care is required, to give them in small quantities and dilute with water; otherwise, if carried to the extreme, that it will upset them. Wine, Brandy, Ammonia, Chloroform, Water, were the agents to which...
Use must be made, associated perhaps with Creosote, or some such medicine. With
the Improvement of Newcastle leg the formed
Thrombus Creosote act well together.
The active application of heat, and friction
must also still be practiced. If all these
means fail, as they frequently will, the
patient being Cold, pulseless, threatened
with immediate death. Another means
a "Dernier ressort" remains of bringing
out. the first indication by perfusing the
blood. It is more particularly useful to the
thought of - in very extreme cases, when in-
ternal stimulants have failed, and death
seems otherwise inevitable from pure collapse.
In the case of the saline injections. In the large
majority of cases in which it has been tried
- if tried it has failed - the it has a wonderful
power of temporarily favoring the patient.
And it illustrates strikingly, the nature of
the disease, by undoing as it were for
true the great mischief which has been
done. The reasons of the failure are,
1st. that the thermoelectricity are apt to
vanish and cool the patient before he
was given - 1/2 oz. in some cases which
nothing has followed. And proved fatal.
The first objection suggests the propriety of a continuance of saline injections internally, at the same time that we employ the saline injections, but it is not a valid objection to their being employed, for many cases have recovered and done well only after the saline injections had been repeated and failed and repeated a third and fourth time, the discharge returning in the intervals. Dr. Alison relates a striking case of this kind.

The second objection may be disposed of by great care in the use of the injecting in thousands. In the practice of fewer it has rarely occurred at all. We have collected the following particulars of 208 cases, in which the saline injections were used.

<table>
<thead>
<tr>
<th>Cases</th>
<th>Deaths</th>
<th>Recovery</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2</td>
<td>3</td>
<td>Dr. Latta of Latta</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td>Eskimo of Ste. Inesburg</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>2</td>
<td>Dr. Adams of Ste. Inesburg</td>
</tr>
<tr>
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<td>1</td>
<td>Mr. Fenley of Ste. Inesburg</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td></td>
<td>Superintend. School. London</td>
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<td></td>
<td>Dr. Duncan Liverpool</td>
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</tr>
<tr>
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<td>131</td>
<td>25</td>
<td>Dr. Mcintosh</td>
</tr>
<tr>
<td>208</td>
<td>173</td>
<td>35</td>
<td>Mcintosh Strathclyde</td>
</tr>
</tbody>
</table>
It must be remembered that in these cases the treatment was only used, when they appeared otherwise quite hopeless. In some, as we have seen, the patients were moribund. Indeed, unfortunately the saline injection have succeeded in about 1 in 6 according to this table; a proportion which the whole is not to be depended. And it is to be further remembered that in many of the cases ultimately fatal, a temporary restoration was secured, which might be of great interest or importance to the patient or his friends. But it is interesting to note that in a more successful set of cases, that of Mrs. Harris of Leeds, in all 5 of which 3 ultimately recovered and four the died well for some days. In three, the saline injection were charged with the protoplasm of nitrogen, and the injection was administered to the patient while in the vomit. Considering that these cases were very unfavorable, from constitution, habits, and intensity of the disease, the cures is striking, and would appear to condemn the modification of the saline injection here referred to.

It is fortunate however that in the majority of cases, reaction may be brought about in the vicinity of this and extreme measures.
And doubtless stimulants of any kind are only of use where nature seems otherwise unfit for the work of reaction—some have thought these injurious as tending to keep up the unceasing state of the mucous membrane of the stomach. The second indication will be to refill the cases with a reactionary tendency by giving bland and nutritious drinks in abundance together with ice which is exceedingly agreeable to the patients. Dr. Buchanan has suggested a very agreeable and useful mixture for this purpose which he calls Italian Albuminoid. 

It is prepared by breaking up a raw egg with half a pint of milk, mingling them with about a pint and a half of water and adding as much cold as gives it whole an agreeable taste. It must both tend to matter for the supply of what has been lost from the blood, and indirectly by the restoration of the secrets, rather than by any inapplicable acid and purgative action of mercury or other medicines. Such treat

ment is quite in accordance with the natural prompt of cure, absorption of water from all textures, and with the natural feeling of the patient—which are strong recommendations,
"Ultratse curam, repugnante naturae, gland medicina proficiscat" Celsus. We think that we have seen the above plan decidedly beneficial - Dr. Buchanan to Commandory strongly too the administration of milk creams, for the purpose of obliterating acid locotions, which are apt to follow an action comes on. As for the third indication General or relief of occasional symptoms, it has been so far incidentally observed if omitting is the most common one, whatever, and which interfere very much with the fulfilment of the indications ofACKET. Comes to severe cases of morphia and similar opium. The avoidance of unnecessary vomiting and undiluted stimulants, and the use of bland drinks as the quiet abdomen may be swallowed together with warm or little. This action will generally succeed more or less in alleviating it.

Activity of treatment, herculean measures, seem then only communicable, in this stage of collapse when "the tendency to death" needs to be promptly "alleviated". In the most severe cases we will succeed best upon the understanding, that nature herself can and will accomplish the main part of the cure.
The great duty of the physician is to study the natural processes and remedies. The most urgent of these remedies will be the drawing for fluids, the elements of sleep, and it were not more unscientific than cruel to withhold these from the patient. The administration, as to form and frequency, must be regulated by the above indications. In this way we, or rather nature, succeeds in the majority of cases in bringing about reaction in various degrees of intensity, the imperfect, sufficient, or complete. In the former case the flagging power of the system will require the further aid of stimulants. The happy median of sufficient reaction is unfortunately missed in a majority of cases, either by the improper or insufficient employment of stimulants in the previous stages of the disease. Consecutive fever is established. The indications of treatment will vary as one set another symptom present themselves.  

1. The very general object is to restore the secretion of urine.
2. To prevent local congestion.

3. To remove urgent or troublesome symp-

toms.

We believe that if the collapse stage be

treated in the above way—the present

indication will be either superseded or is

far fulfilled—but we may further full-

ify these by promoting the urinary secretion

by diuretics—removing local congestion

by the use of local bleeding or blisters.

The question of general bleeding is now very

important—According to good authorities

it is often required to relieve the lump

of the black blood flowing in parts remote

from the heart, supposed to be in materializa-

tion—According to others it is inadvisable

and not safe—as we readily can believe from

the risk of secondary collapse from which

so induced, patients have died—So Bache-

man prefers draining it from the first.

The tendency to coma will be so far

obviated by blisters to the nape of the neck,

but in such, very serious circumstances,

the restoration of the urinary secretion

is a matter of the first importance.

In many cases it is never, or only partially

brought about, and death by coma

sharply follows.
Military may still be a most troublesome complication requiring treatment; after we have specified above—The affording liberal draughts, with Spirit of Niter is a useful mixture in such circumstances, tending at the cause twice to allay tori-sity and promote diuresis.

During this period, that of convalescence, once the patient must be kept warm and quiet. And as soon as the stomach will bear it, he should have light broths, soups, broth in small quantity, and often. Sudden and great exciting must be carefully avoided.