

1859. John Horne

On preventive measures to be employed against epidemic disease.

The subject is one of great interest to all classes of the community and peculiarly so to the physician. Dr. Hays says, "I have long thought that there is no subject on which the physician could employ his time and ability better for the benefit of his fellow-men than in the investigation of febrile contagion, in order to ascertain the laws by which it was communicated and the means by which it may be prevented."

It is interesting to the non-professional public as well as the professional because none are exempt from its influence. The poor suffer no doubt, to the greatest extent; but - the rich are by no means proof against it. However unwilling the rich may be to attend to the comforts and necessities of their poorer brethren, epidemic disease compels them to do it; or they must suffer impending consequences of which continued fever has been said to be one. Some writers have gone as far as to call it a visitation of providence on the higher classes, for their neglect of the lower. Interesting however though it be from its direful consequences, people usually attempt to remedy it when too late. The remedial means to be adopted must be according to whether we are

contagionists or non-contagionists and whether the disease spreads only by an exciting cause or springs up "de novo."

We shall proceed now, on the supposition that there is such a thing as contagion, the question of epidemic disease, arising "de novo" is of vital importance practically, in treating of preventive measures, to be employed, a point upon which contagionists equally with non-contagionists are agreed.

The plan which we shall follow as the best means for procuring an immunity for the inhabitants of a country or district, will be as follows.

I. By quarantine laws preventing the entrance of an epidemic.

II. Removal of the predisposing Causes.

- (1.) By improved morals.
- (2.) By comfortable dwellings.
- (3.) By removing the obstruction to the cutaneous secretion.
- (4.) By proper food.
- (5.) By pure water.
- (6.) Avoid all excesses.
- (7.) Remove miasmata and noxious exhalations.
- (8.) Prevent the accumulation of decomposing animal and vegetable matters, animal excreta.

III. Quarantine Laws preventing the spread of an epidemic.

IV. Seclusion.

V. Ventilation.

VI. Disinfectants.

VII. Prophylactics.

VIII. Abortive Treatment.

I. By quarantine laws preventing the entrance of an epidemic into a Country,

To prevent the entrance of an epidemic into an isolated Country such as ours, is not difficult and is even practicable on a Continent. It is true that an epidemic may enter a Country notwithstanding the strictest Quarantine, travelling as it does by the wind; but there appears no reason however, why we should abolish quarantine laws; on the contrary it might be made us more vigilant against unnecessary exposure to Contagion.

It is undoubtedly the duty of the Legislators of every well governed nation, to see that its inhabitants be not unnecessarily exposed to the danger of Contagion. Quarantine Laws are not without their opponents even among Medical, but especially amongst mercantile men. But it would be worse than foolish to abolish them either on account of the scepticism of a certain proportion of the Medical, or on account of the interested opinions of the Mercantile profession. Better surely that the trade in any district suffer to some extent than that a whole Community - it may be a whole Country should suffer the ravages of a wide spread epidemic. Is the slight hampering of mercantile speculation to be weighed in the balance

with the devastation of an epidemic? No; we should think no sensible persons would compare them for a moment. But these opponents may ask what is quite fair, "do these laws really prevent the entrance of an epidemic"? Doubtless they do, from the well known fact that the inhabitants of Iceland from time immemorial enjoyed an exemption from small-pox, until in fact the Commerce with the Continent of Europe laid them open to the receipt of contagion, which in the first instance committed amongst the unprepared and un defended natives ravages of the most appalling description. No law ever pleased all parts of the Community however good it might be, and therefore we cannot expect quarantine laws will. Macculloch has well remarked that quarantine is not a matter in which innovations should be rashly introduced, wherever there is a doubt it is proper to incline to the side of security.

In this Country we have to guard against the entrance of more than one epidemic; we ought therefore to be ever vigilant, lest perchance it come as a thief in the night and entering one of our large Sea-port towns carry waste and desolation in its train

to form a proper estimate of quarantine, let us
contrast the state of a Country, before and after
quarantine laws were introduced. No better
illustration could be obtained of their value,
than that afforded by the large commercial
City of New York in the United States. Until
recently these laws were almost a dead letter.

The Yankees thought themselves secure against
plague by distance, and to Yellow fever they
became reconciled as a domestic evil. From
1757-91 Yellow Fever appeared occasionally,
but after a later period, it became more
frequent and destructive:— a consequence
no doubt of increased population and more
extensive intercourse with places where it
was prevalent. After two or three successive
attacks, the worst in 1822 it became obvious
to the most intelligent Citizens that some-
thing must be done for the welfare of the
Community. They on that account constituted
or remodelled their Code of Quarantine Laws
and determined that they should be strictly
enforced. The effect has been admirable. Since
that time, fever has not appeared in
the City, nor almost a quarter of a
Century ago. Now as far as we can judge
fever would have been prevalent. Then

still, but for the enforcement of quarantine. After such evidence of the value of quarantine it would be superfluous to quote medical authorities on the subject in support of it; as, since the enactment of these laws, numerous vessels have very frequently been debarred from entering port.

Regarding the length of time a vessel should lie in Quarantine, before entering a Harbour, must depend on the health of the men, whether they are and have been healthy during the voyage; - the duration of the voyage; - what was the character of the epidemic that was reigning among them? if it, when did they become convalescent &c &c.; are questions of immense importance and must therefore be punctually attended to. To have these laws carried out, well paid officers might be employed, who would not subject themselves to the influences of bribery, & would prevent any infringement of these laws, as by smuggling articles of clothing, which should have been previously submitted to precautionary measures to be mentioned afterwards. Dr Layslock says all specific fever poisons, manifest themselves within a month, generally within a fortnight.

If these statements were found correct, they would be very valuable quarantine hints.

II. Removal of the predisposing causes.

(1) By improved morals

There could be no greater benefit conferred on the lower orders than that of an improved moral training. It is taken for granted that the higher and best classes have that advantage, although occasionally, not turned to good account. For this purpose, government ought to provide an education for the youth of the poorer classes, which would not only benefit them but the nation at large. The advantages that would accrue from every child receiving a course of popular instruction on the value of cleanliness, sobriety, and all the kindred virtues, would be almost incalculable to them and their contemporaries. Likewise contrast with that the bad effects of filth, in its various forms, to them, and the disgusting nature of it to others. This instruction ought to be commenced in the nursery, and school-room, and continued through manhood. The more advanced might be improved by popular lectures, so common in every city and town of any importance.

The subjects ought to be interesting as well as instructive, such as "Cleanliness," "Health of great Cities" &c, Showing what dangers they are made to encounter on account of improper hygiene; How they may escape these dangers; we might demonstrate to them by the bills of mortality the difference of deaths per thousand of the inhabitants in St. Pauls Church Lane, (Congate), and Murray Place, which will illustrate well the value of cleanliness &c. By wholesome literature circulated among them, morals might be greatly improved. If boys and girls were so trained in youth they would grow up with a knowledge of what might be advantageous to themselves & perhaps their families. By such training an inestimable amount of vice, and disease the result of vice would be prevented. Further it would prevent the propagation of vice. One vice leads to another as equal to drunkenness. Hence if we could secure this moral training in youth many of the predisposing causes of epidemic disease would probably require no mention and likewise epidemic disease would and need be less dreaded.

(2.) By Comfortable Dwellings

It is of immense importance that we should have not only well constructed houses, but that they should be built on a proper site. The nature of the soil for example has a great influence on the spread and violence of an epidemic.

Brimingham affords a good illustration of this fact. This town situated on Red Sandstone had only Choleraic Diarrhoea, while the neighbouring towns built on Clay, had an alarming visitation of Asiatic Cholera.

This is an evil that cannot always be remedied in large towns, but is perhaps worth a little attention in selecting a new site for a single or a group of houses. The site can often be much improved, as when it is marshy, by underground drains and cultivation of the land. But the site may be good in itself and the dwellings wretched. From examinations last summer, it was found that the cottages of the poor in many of the most healthy country districts were in many respects not superior to the dens and hovels of the poor in large cities. The cottages were so low in the roof, that the chimneys could not

walk upright. The only admission for solar rays in their dwellings was nine inches of glass, besides an open door. The principal additional evils in the houses of the Working Classes in large towns and Cities are bad drainage, and the manner in which the houses are clumped together. The houses are rendered more uncomfortable and unhealthy, by being overcrowded & the great neglect of due ventilation. They are amongst the most productive causes of a predisposition to pestilence. Bad or even no ventilation is a necessary consequence of the localities and positions of the houses of many of the poorer classes situated in lanes, courts, closes and narrow streets, or what is perhaps worse, at least no better, in underground cellars, in the better houses. This bad ventilation is rendered more malignant by noxious emanations from district drains, common sewers &c. To this ventilation is superadded, overcrowding, and that some times to excess. The Liverpool Sanitary Board in speaking of the epidemic of 1847 says - "there are forty one

individuals and even many more in a small house." Consequently the respiratory food is contaminated from all these sources and the exciting cause of pestilence arising will spread much more rapidly and widely, and likewise become more deadly, when these concomitants are present. One of the Royal Dispensary Medical Officers, tells that during the time he was a pupil, in that establishment, he had in his public practice nine cases of typhus fever, in one den, in the Congate, with a small window and it did not open. It is evident that the sooner that this bad ventilation + over crowding is remedied, - the better for all classes.

(3.) By removing the obstruction to the Cutaneous Secretion.

That this is a predisposing cause, must be apparent to every body, who even looks at the subject in the most cursory manner. In fact it must follow that if any of the natural processes are not performed, or even imperfectly, they will predispose to disease of all forms. Now if the thousands of miles of

tubage for elimination of sweat and mucinous matter from the system, be occluded, the poisonous substances thus detained in it must act very detrimentally upon the vital powers. This occlusion takes place in all claps, but more particularly in the lube, and the reasons for this need not be far fetched.

(a.) From prejudice. - Prejudice is often the fruit of ignorance, mistaking the coincidence with what could have happened independently of another circumstance. For example, we know an old soldier who thinks he caught a cataract from washing his feet. He accordingly made a vow, that the mistake would not occur again. So he has not washed his feet, since the Battle of Waterloo.

(b.) From want of a proper supply of water. This deficiency arises not so much from want of water in a large city, as from its not being in their dwellings. And the difficulty with which it is conveyed to them, sometimes to the height of eight or ten flats. This sewer, to what is of little value in most cities, and

towns in Great Britain, immense value at least in the eyes of the Water Carriers. Every Dispensary Accoucheur can testify to the truth of this scarcity, in some part of his practice. Their poverty, in many instances, assists much in their neglect of the vituperumbarry system, because when they have water at hand the utensils for an ablutum are next wanting and so they go from infancy to manhood without the general ablutum. Now this defect ought to be met by our civic authorities providing public baths gratis or at a very low figure that all might enjoy the blessings of a Clean Skin.

(c.) From the degraded State of the People. That is no doubt the great cause of occlusion. Those people are generally both immoral and ungodly who cannot be careful and troubled about anything that concerns, their own or their neighbours prosperity and comfort. We ought to put the remedial blessings in the power of all and those at least who would employ them, if placed at their disposal. Some, hygenic laws

Can be enforced, by the Authorities, but it would appear rather ridiculous to compel a man to wash his own person.

(4.) By proper food.

Unwholesome and insufficient food is another self-evident predisposing cause, which does not occur alone, but is coupled to the other concomitants of poverty, dissipation, and degradation. Dr. Alison has an opinion that the prevalence of Contagion is in direct proportion to the state of physical destitution. His opinion is well illustrated and supported by the severe epidemic of typhus during and after the late Irish famine. During the epidemic of 1826 Liverpool and Glasgow having nearly the same numbers of inhabitants; but the former, having a poor law, received into the hospital 700 patients, the latter (Glasgow having no poor law) received 7000 patients into the hospital. This contrast teaches us the value of a proper supply of food as a preventative measure.

(5.) By pure water

Bad water is also productive of much evil, by producing ulceration of some of the intestinal glands, causing dysentery, diarrhoea

and low typhoid fever; We have had numerous examples of it, predisposing to choleraic disease. e.g. - in London when the people of a particular district were seized with Cholera, the symptoms were stopped on the patients ceasing to drink or use for Culinary purposes, the water of an impure well. Likewise the same epidemic of Cholera in Newcastle, was attributed by many to bad water. Spurious and inferior alcoholic liquors produce nearly the same effect.

(6.) Avoid all excesses

All excesses of a mental or physical kind should be strictly prohibited; whether in the prospect of, or during the presence of an epidemic. Intense mental application renders the body weaker, and therefore a more easy prey to disease. If the student wishes to escape, an attack of the reigning epidemic, he must study in moderation. - He must desist from burning the midnight oil. All fear and anxiety should be removed as far as possible - no matter what its source, whether about friends, his disease, or trials of any kind as those caused by pecuniary difficulties. If we allow, mental emotion, to rise high

It may call into action, latent fever that may have been working in the system for a considerable time. All physical excesses should be abstained from, which reduce the body below its healthy state. Amongst these excesses, perhaps none are carried to such an extreme as the pleasures of the table & venery.

(7.) Remove miasmata and noxious exhalations.

It would appear extraordinary to urge the necessity of removing marshes, swamps, &c. from the neighborhood of towns and human habitations. They might be removed by underground drains, to prevent as much as possible, exhalations which would be otherwise sure to take place. Some men whose opinions are worth attending to, have gone as far as to say that the emanations generate epidemics de novo; but whether that be true or not, they predispose to them very strongly. The noxious emanations, from burying grounds are also very injurious to health, especially when situated in the center of a large town and still worse if the grave-yard is higher than the town, because if the water is not brought from a distance, it is almost sure to be contaminated with the de-

- Composing matter from it. The Custom of having burying grounds around Churches and Chapels, in towns is happily abandoned for Cemeteries in the suburbs. All establishments or manufactures in which offensive odours are given out, or generated by putrefaction should be removed as far as possible from towns as predisposing causes. These are, pigsties, prisons, Cattlepens - Slaughtering houses, Blue-Works, Soap Works, Gas Works &c.

(8.) Prevent the Accumulation of decomposing Animal and vegetable Matter, Animal excreta &c.

The accumulation of these should be strictly prohibited near human habitations. Better that they should be washed into the sea & recovered at a great expense in a different form as Guano, than that they should predispose to an epidemic, because human life (in this Country at least) is never a matter of Pounds, Shillings, and Pence. They might not only be carried from men's dwellings, but that in a way which will prevent their gaseous escape. Where this is not attended to, where Water Closets are not fashionable, but privies and Cess-pools, the gaseous parts escape, con-

taminating the atmosphere and the fluid filters through the soil, rendering the water unwholesome. The accumulated emanations in the atmosphere and the polluted water used in diet, prove in no small degree, the propagation of pestilence. These accumulations take place to a great extent in all towns and even those which are celebrated for their pure and salubrious atmosphere have got their share of them. We have heard a first Class physician say that in one of our most aristocratic Scotch Watering places, privies were very rare, & a Water Closet a perfect luxury.

III. Quarantine Laws preventing the Spread of a Epidemic.

When pestilence first makes its appearance in a country, it generally occurs in a particular town and family. The first thing that we ought to do is to have the patient conveyed to an isolated hospital in a sequestered spot, especially devoted for that purpose, taking it for granted that he belongs to the lower orders. In the mean time the house should be emptied of its inhabitants, in order that the house may undergo the necessary purification to be mentioned afterwards. The porters engaged in the removal of the fever patient might be chosen from the list of those who have been previously attacked, or if that is impracticable, from those who have been seasoned by emanations of various sorts, as "Sight Men" or those who have been engaged in cleaning ^{common} sewers &c. Grave-diggers would also answer the purpose well. The Medical Attendant ought to take a bath after leaving the fever-case before visiting his patients or his own family who have no epidemic disease. All the other precautions to be mentioned afterwards, should be observed. Notwithstanding

all these precautions and restrictions, pestilence may spread. What is next to be done? It would be next to impossible in large towns and populous districts to maintain a non- intercourse with the neighbourhood. Undoubtedly more success would attend individual and family precautions. Dr. Marten gives two or three examples, of the value of quarantine, preventing the spread of Continued fever. As - the farmers of some parts of Wicklow who would hold no communication with strangers during the prevalence of the epidemic, had no case of fever among them. And also some villages in the neighbourhood of Lisinnore, are stated by Dr. Barker, to have been preserved from the fever, chiefly by the exertions of some of the Pimian Catholic Clergymen who persuaded the inhabitants to avoid all communication with Lisinnore and another town in its vicinity where the fever was rife. In these days of Coaches, Canals, and Railways, such frequent intercourse is kept up, between one part of a city and another, and between different cities and towns in the Kingdom, that to think of Compulsory quarantine

laws, would be something ridiculous after the epidemic had appeared in the Country because the various infected articles of clothing would be requested, and transmitted for the purpose of purification, and thousands of people passing from infected districts with perhaps the contagion would not be detained in quarantine for the purpose of avoiding the spread of an epidemic, on account of their having to follow their avocations. So that we apprehend the principal value of Compulsory quarantine is preventing the entrance of an epidemic into a Country.

Seclusion.

Departure from the place where the Contagious disease has made its appearance is protective both such as have not been exposed to it.

But seclusion in a town is often imperfect although there may not be, the slightest intercourse with the surrounding inhabitants from the air being contaminated by emanations from the sick and dead, or as it became infectious to the secluded inhabitants.

Hence the value of removal to a healthy place at a distance, before the epidemic

has spread to the district where you reside. If the epidemic is in your neighbourhood your chances of safety, by removal are considerably diminished. But there are many of the inhabitants who cannot get themselves secluded, or accomplish a removal from the infected locality. These should not enter houses where there is not the best proof of the family being in perfect health. Thus forbidding theatres, balls, Concerts, Churches and all promiscuous audiences and assemblages. Where necessity demands the entrance of a private house, the bed rooms, if there be remembered, are the apartments of greatest danger. At the time a contagious disease is raging in any particular town or district, the practice of house to house visitation by qualified medical men might be enforced; but some go further in their opinion that a "Vigilance Committee" should be set on foot to watch all places where it is present, and when it makes its appearance in healthy localities, a separation might be made of the living from the dead; the healthy from the diseased, that the plague may be stayed. All linen and wearing apparel should be

washed at home, likewise the reception of any article of clothing or any porous substance should be received with the greatest care, as they might be the means of conveying contagion into an unsuspected house. But supposing contagion has got into a family of a respectable position in society; you cannot haul him or her off to an hospital, neither is it necessary. What then is to be done? If the patients room is not large and well aired, with a fire place and at a distance from the most occupied rooms, try if you cannot secure one with these accommodations. If you succeed, effect a removal as soon as possible, & purify the room, he has left, by suitable means. By Occlusion &c. being adopted and the strictest attention to hygiene, Contagion may be checked in that family and perhaps it may be the first and the last case in the locality. But your patient may be from the lower orders and in a town where there was no anticipation of an epidemic, and if there were the Authorities had been deaf to the voice of their superiors in that matter. Hence no fever hospital had been provided which might have been. If in a small

Now, secure an empty house and convert it into a hospital of a temporary nature. If an epidemic were to appear in an army the sick ought to be removed to a hospital of a temporary kind, at a distance from the other men. If on board a vessel while at sea, exclude as well as possible, the well ventilated apartments. If in a harbour put the patient into a hospital.

Now in a hospital such as the Royal Infirmary of Edinburgh as question has been raised, "ought we to admit fever patients into the general medical wards, or confine them to particular wards devoted for that class of patients?" Now a great deal can be said on both sides of the question. We will reverse the order of the question for convenience. "That fever patients ought to be reserved in wards especially devoted for that class of patients" is a doctrine advocated by many. If the ward is well aired and 80 many cubic feet devoted to each patient, the system is faultless as concerns the safety of Medical Men &c. But this has been found to absorb accommodation very quickly which is very valuable in such an

institutions and especially at the particular time. It is to be feared that the ten to fifteen hundred cubic feet of breathing space has been diminished and hence a great concentration of the poison to the danger of medical attendants and servants. It has been said, that accommodation is only what is due to attendants, and therefore no pecuniary difficulty should be weighty enough to place their lives in imminent peril, and it can be no other than pecuniary, because a house convertible into a temporary hospital can always be procured. If that be impossible, a tent might be erected in an open space, which has already been done, and as many recoveries have been effected as in any hospital, the patients having no medicine but water from the stream and the pure air of heaven.

Others want an intermixture with the general patients for many reasons.

As the fever wards are occupied by one set of clinical teachers, (Edin²?) this intermixture would remove this exclusiveness and make a more equal

division of the patients, an advantage for both teacher and taught.

As a matter of economy they may make every third bed a fever case, if necessary and it would not take up so much accommodation as a fever ward.

Further the spread of the epidemic is not increased by this arrangement that may or may not be true; but certainly the results of this plan in the female wards of Professors Laycock and Bennett during last winter (I believe) don't favour this innocent view of the matter. There was only one fever case admitted, from which five or six cases of erysipelas occurred. But we observed that no case of erysipelas occurred until the patients became convalescent and had begun to walk about the ward which brought them in contact with the others. The latter difficulty might be overcome by having a convalescent ward. It is upon the whole the most common sense view to advocate isolation. We might remember that we have no right to risk a patient's life by any arrangement. But whatever

plan we adopt we should remember not only ourselves, but teach others that the lungs and skin are the principal media for the absorption of Malaria Parasite; therefore we ought to make our visits as short as consistent with duty. We ought not to come, (says Professor Laycock) within two or three feet of the patient unless for a few minutes. Within a limited distance, say three or four feet, the danger is increased by the exhalations from the patient being more concentrated. This is well illustrated by the fatality amongst Roman Catholic Clergy. To avert the ravages which epidemic disease makes amongst them more than any other Clergy, Dr Laycock recommends the use of a speaking trumpet while on professional visitation amongst the sick in Hospitals, and poor localities. This would enable them to stand at a greater distance than they usually do.

Ventilation

To prevent medical men, and others visiting the sick, being unnecessarily exposed to a concentrated and poisonous atmosphere, due regard should be

paid to ventilation, in order that the
materies morbi be diluted. This
ventilation is materially assisted
by the adoption of large charcoal fires.
It is said to benefit visitors by a hot dry
atmosphere being a bad conductor
of materies morbi. This is recommended
for epidemics of Influenza, & Trachoma
Yellow Fever may be an exception. Steu-
tept drapes of oiled silk have been re-
commended during visits, but probably
this would be of little value, perhaps
evil might result, by throwing an
additional work on the more sus-
ceptible mucous membrane of the
lungs. You are told not to swallow your
saliva during a visit - but wash your hands
out immediately after leaving the patient's
room. These are assisted by disinfectants
such as charcoal, set up in vessels
around the apartment as in some di-
recting rooms. To destroy the Materies morbi
Vegetable and Mineral acids have been
recommended for spraying the patients
body. This does two good purposes,
removes the sordes and destroys the
Materies morbi, also this allows

cutaneous transpiration. Dr Christian recommends
the use of mineral acids in preference to
vegetable. He says, the former have all the
advantages of the latter, with the additional
power of destroying any organic poison. The
vegetable acid covers the bad odour does
not destroy it. He rather disapproves
of all Oils and essences. Camphor
has been recommended to be worn about the
person

Disinfectants

All the secretions from the febrile patient of
focces, urine, expectoration, pus, and
blood are to be immediately removed
and put where they can injure no one.
If these matters cannot be at once re-
moved, a good plan is to throw a hand-
ful of freshly-burned charcoal into the
containing vessel - by this means
the poisonous matters are absorbed into
the porous structure of the charcoal
and prevented from contaminating the
atmosphere of the sick Chamber.
Some prefer Chloride of lime or Dr Wm
Burrill's disinfecting fluid. The Su-
perior value of water Closets over Porcelain

depends on the instantaneous removal of the
excreta &c. People have more than once caught
a Contagium from visiting a district prison.
An important advantage will be gained
to patients and visitors by removing the foul
bed clothes at least every twenty four
hours, as this will be the surest
means of Contagium. How are we to destroy
the Materiae Morbi in these fomites?
By two means - Heated fluid and air
All bed clothes, linen of every description
wearing apparel &c, that cannot be
injured by hot water ought to be im-
mediately immersed in it. But in the
ward robes of the Hygie Claps, many
articles of clothing are to be found which
would be much injured in beauty &
fabric by the immediate immersion.
The finest articles ought to be exposed to
a dry atmosphere of at least 140° -
 150° . The means of destroying Contagium or
Materiae Morbi by freezing clothes is of
more doubtful benefit. Dr. Laycock impresses
much on his students the value of avoiding
infected currents of air, - An advice to apt to
be neglected by both professional & non-professional
We ought - prolong this essay almost

"ad infinitum" by dwelling on the advantage of keeping every thing & place, scrupulously clean and the necessity of keeping the body up to the highest standard of health, all times & circumstances permit.

Prophylactics.

D^r Laycock during a visitation of Cholera in York enforced the daily administration of doses of Quinine to the inmates of the Lunatic Asylum in that City with the happiest results. Not a single case of true Cholera and only a few trifling cases of diarrhoea occurred. D^r Bennett however did not meet with the same success in the Royal Infirmary of Edinburgh.
D^r Simpson recommends a similar plan of treatment against puerperal fever.
D^r Reeb's Quinine attributes a similar power to wine. Its value in Erysipelas has been demonstrated by Mr. Bell of this City & Prof. Laycock is of opinion that it acts probably upon the effete excrementitious matter in the blood; upon the accumulation of which, the spread of Erysipelas would seem to depend. He adduces the fact of the influence which an old rusty nail thrown into stinking water has in sweetening it. However it is difficult to conceive how iron can exert any influence, upon the blood except near where the circulation and has never been detected in the urine.

Bella-Donna is believed by many to have a preventive and protecting influence upon the body against the contagion of scarlet fever. But the experiments in George Watson's Hospital do not favour such ideas. Scarlet fever having appeared within the building bella-donna was given to 54 healthy boys. After this plan of treatment had been in operation for a month - after full time allowed, therefore, for the development of the protecting influence of bella-donna, if it really possessed any - 23 out of 54 took the disease. Professors Henderson & Laycock both recommend its use, from its good effects in their practice. The former says, Bella-donna does not receive universal approbation for its prophylactic powers, any more than quinine does for ague. yet we ought to use it. And last though not least, vaccination, as a protecting means, against the poison of small-pox, the virtue of which no one can doubt.

Abortive Treatment.

Some physicians still cling to the idea, though a minority, that by giving an emetic at the commencement of a febrile attack, the progress of the disease may be stayed

Others assert that a better result is obtained by
Hydropathic treatment. These and all other
abortive methods of treatment still remain
in very doubtful significance.

John. Horne