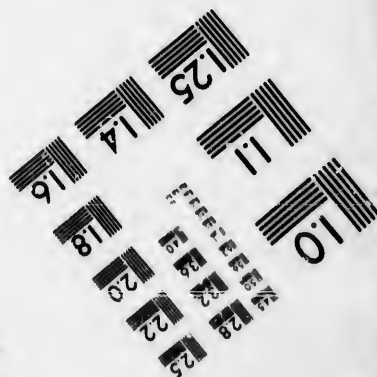
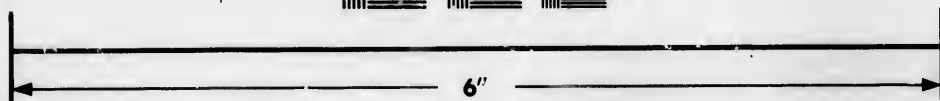
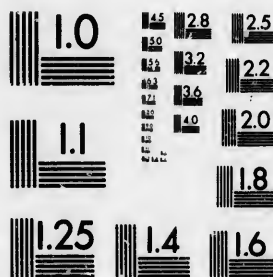


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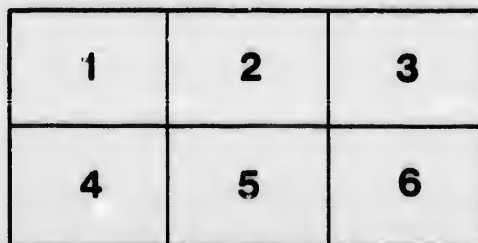
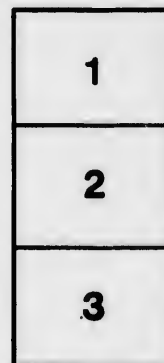
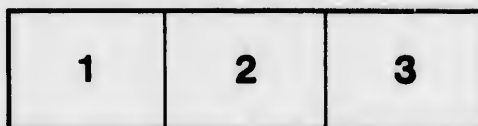
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MEMORANDUM ON CHOLERA

AS TO ITS

ORIGIN, ORGANISM, CAUSES AND PREVENTION

WITH

PREMONITORY SYMPTOMS.

PREPARED BY

Dr. ROOME, M.P.,
President of Dominion Health Association.

Hon. Dr. FERGUSON,
Secretary.

Printed by Order of the Minister of Agriculture, Ottawa.

1893.

MEMORANDUM ON CHOLERA
AS TO ITS
ORIGIN, ORGANISM, CAUSES AND PREVENTION
WITH
PREMONITORY SYMPTOMS.

EPIDEMIC OR ASIATIC CHOLERA.

The duty of preparing for a possible epidemic is prompted by every consideration of humanity and self-interest, as well as by the interest of the State.

Cholera may reach the continent of America this present season. Its march through Asia and Europe during the past two years has been somewhat rapid. Leaving its native haunts in the east, after ravaging the cities and towns of the Nile and Mediterranean, the scourge has crossed into the adjoining continent, and is now alarming the towns and cities along the rivers and coasts of western Europe. In view of the eventful record of previous visitations of the dreaded disease, it behoves us to study the lessons taught by the past and be prepared to profit thereby.

It is not the intention of this short treatise to go into the details as to where Cholera originated, or to trace the different epidemics which have started in the east, and, journeying westward, have passed over Asia, Europe and America, during the present century, leaving death and desolation in their train. To do this would fill a large volume.

During last summer and autumn the disease had, as stated, spread over Europe, and at the setting in of winter it had reached the western shore of that continent; so that we may say it is now directly opposite to us. Warning has been given, and it is our fault if we are not prepared to combat it if it should come.

With this object, the following suggestions are offered in the hope that they may direct the attention of those in whose hands they may be placed, towards preparing for a possible invasion, and stamping it out as soon as any case is known in any city, town, village, or hamlet, in the Dominion.

It may be first necessary to consider what Cholera is.

WHAT IS CHOLERA?

Mr. Ernest Hart, the able editor of the "British American Journal," defines it "as a filth disease carried by dirty people to dirty places." We consider that this definition may be universally accepted.

The germ of the Cholera, without which the disease cannot develop, is like the germs of all infectious epidemic diseases, a microscopic organism of the lowest type, which develops and grows in decaying organic matter. It was first discovered by Prof. Koch a few years ago, and called the comma bacillus. Bacteriologists have been able to cultivate these germs in their laboratories. Their nature and habits can be carefully studied and are pretty well known.

Cholera being a filth disease, in order to diffuse it over the world there are required three factors for its cultivation and spread, viz. :—

- 1st. A centre of population for its cradle.
- 2nd. A ship or boat for its transport.
- 3rd. A number of towns properly prepared for its reception and development.

In other words, Cholera originates and gathers headway in foul places, follows in the pathway of commerce chiefly along water courses and seeks the purlieus of cities and towns where the germs or bacilli are propagated.

Cholera, in the same way as other epidemics, is always more prevalent and fatal in unsanitary localities. It has been known time and again to pass by towns in Asia and Europe where sanitary arrangements were complete; and also in America, during the previous epidemics, in some of the largest cities, it has been known to pass around clean and well drained places. The experience of all the visitations of Cholera has been well defined.

It has been known to stalk deliberately along from place to place as a mighty scavenger, lingering longest, and with terrible vengeance, in unsanitary places where dirt and filth predominate and where zymotic diseases most prevail.

This being the case, it makes it the duty of intelligent citizens to heed the lessons taught, and while seeking the favour of divine protection from the ravages of the dreaded scourge, seriously to undertake to put into practical operation the sanitary measures by which alone its destructive force, as a pestilence, can be averted. Cholera being a germ disease of microscopic organism of the lowest type, in order to combat its progress it is first necessary to understand its localizing causes.

LOCALIZING CAUSES OF CHOLERA.

1st. Decaying organic matter, bones, hides and offals, unclean houses, neglected stables, putrid mud and filth.

2nd. Bad drainage, local dampness, malaria.

3rd. Obstructed sewers, filthy streets, gullies, garbage and cess-pools.

4th. Water in any way contaminated by putrescent organic matter, particularly from any leakage from privies.

5th. Neglected privies and putrefying excrement.

6th. Overcrowding in rooms and bad ventilation.

Now, these localizing causes are not only applicable to cities and towns, but to villages, hamlets and rural districts as well, and are obviously controllable and should be prevented by the state, provincial and municipal health boards, actively assisted by the citizens as a whole.

In places where these localizing causes are allowed to remain unobserved in any of our cities and towns, if Cholera gets a foothold and becomes epidemic, death will exact penalties from the whole city or town for the folly and public crime of having allowed such places to remain in existence. And as adequate remedies are at hand to remove all localizing causes, and as we have had timely warning of the possibly approaching pestilence, will it not now be criminal folly for us to neglect them? In Europe, in the present as well as in former epidemics, in towns where proper sanitary conditions have been observed, the disease is rare, and all may

rest assured, when there is no dead, decomposing, fermenting, putrefying organic matter, no filth of any sort in the air, food, water or soil, or in the human body, there will be entire freedom from Cholera.

Having described what Cholera is, and its localizing causes, next to be considered is its prevention.

PREVENTION OF CHOLERA.

The prevention and spread of Cholera depends 1st, on quarantine, and 2nd, on an organized system of defence ; the former to be carried out by the Dominion Government, and the latter by the provincial, municipal and parish Health Boards, aided by the citizens. As to quarantine it is necessary that no expense should be spared in procuring the most modern and improved appliances, and seeing that they are properly used, so as to prevent, as far as possible, the disease or its germs entering into our country ; although in no former epidemic in Europe or America has the most rigid quarantine been sufficient to prevent Cholera from gaining a starting point, as the disease is not only carried by persons and their clothing, but the germs may be in their bowels, in active vegetation, and afterwards show their effects, after quarantine has been passed. All goods and articles coming from infected districts are liable to contain some of the bacilli. But rigid quarantine is doubtless of much use, and should be efficiently maintained, for if not preventing entirely the entrance, it will destroy thousands of germs which might otherwise enter and be spread broadcast over the land.

With the experience and light gained from other epidemics, the people of Canada should not be so blind as to hazard the protection of the country exclusively upon any restrictions in the nature of quarantine. Therefore, it is necessary at the earliest moment to prepare our system of defence, which must be carried on through our Provincial Health Boards, aided by the Municipal and Local Boards, in removing all the inciting causes of Cholera.

1st. There should be systematic sanitary inquiry and inspection of every street, block, tenement house and insalubrious spot in every city, town and village.

2nd. If Cholera should make its appearance there should be a faithful house-to-house visitation in the infected districts, for the purpose of imparting needed advice and procuring timely applications of remedial means for preventing it, both in places and persons, or for lessening its severity should it have shown itself. By these means localizing causes are promptly discovered and removed, fresh interest in hygiene is awakened in every domicile, and the exciting causes of the malady are removed wherever they are found. While the Health Boards are endeavouring to do their duties, it should not be forgotten that every citizen of the Dominion is in duty bound to pay special regard towards assisting the officers in fulfilling their duties, as well as looking after the conditions necessary for domestic health and the public safety. Reason and past experience unite in teaching that, with reference to an impending epidemic of Cholera, all persons should endeavour to become informed as to the proper means for averting or mitigating the epidemic by sanitary measures.

PERSONAL HYGIENE AND SELF CARE.

If the epidemic should reach our doors, whether by infectious transmission in the persons of the sick, or by any other agency, the necessity for increasing vigilance in reference to all the conditions of domicile-hygiene will be imperative.

The local causes we know. These chiefly imperil families, and these we must attempt to control.

In fact Cholera as a pestilence must be regarded as a preventable disease.

We ask serious attention of all persons to the following suggestions which, if strictly carried out, will lessen the death rate materially during the coming season :—

1st. Avoid all causes of excessive nervous exhaustion : avoid intemperance in eating and drinking ; live upon nourishing diet, and keep the digestive functions in a healthy condition.

2nd. Avoid and discourage panics and needless anxiety. Cholera in the early stage is generally curable. Excessive fear often brings on the premonitory symptoms.

3rd. Promptly second the efforts of the public authorities in all enlightened plans for protecting the public health.

4th. Aid and encourage the removal and prevention of the localizing and exciting causes of Cholera throughout the district in which you reside.

5th. Give particular attention to the drainage and cleanliness of your premises and the neighbourhood, and see that the water supply is both pure and sufficient.

6th. Inculcate habits of personal neatness and cleanliness.

7th. Avoid the employment of purgative drugs, except when prescribed by a physician.

8th. Believe not in the vaunted specifics. It is one of the saddest facts developed in Cholera epidemics, that many are the victims of the abundant quackery that so unrelentingly pursues its mercenary ends in the midst of scenes of suffering and death.

9th. Live regularly, and on food that is readily digested, being well cooked. Avoid unripe and unseasoned fruit and decayed vegetables.

10th. Insist on the utmost cleanliness and purity of every portion of your apartments, furniture and clothing.

11th. Thoroughly and frequently ventilate every apartment in the dwelling. Cellars and closets must be kept dry and clean. This should be aided by fires in open fireplaces wherever available.

12th. Be particular that the soil around your house is not contaminated by stagnant pools of water or animal and vegetable refuse. Remove from your house all rubbish in a state of decomposition.

13th. Empty, clean and disinfect all what may be soiled in your house, or in its vicinity ; cesspools, privy pits, water closets, sinks, drains, gutters, manure boxes, stables and other dependencies.

14th. Carefully protect the body against sudden alternations of temperature ; wear flannel when exposed to any changeable temperature, or suffering from any disorder of the bowels.

15th. Lastly, all may be summed up in the following : Live healthily, on a healthy diet, in a healthy house.

The principal disinfectants now used are :—

1st. Fire, keeping house perfectly dry, using the grate in houses that have them, and in other houses stoves, as perfect dryness destroys the Cholera bacillus.

2nd. Steam.

3rd. Boiling water.

4th. Bichloride of mercury, 2 drachms to a gallon of water.

5th. Carbolic acid, 4 oz. to a gallon of water.

6th. Chloride of lime.

7th. Sulphurous acid, and, in England, Jeyes' Fluid, has gained quite a reputation, being recommended by some of the leading authorities. It is a preparation of creoline, being a derivative of coal tar, containing the qualities of creosote acid.

In all cases about houses or premises, one or other of these disinfectants should be applied, when there has been any decayed organic matter. Boiling water can often be used with great advantage for destroying germs on external surfaces and on clothing. But when a general disinfection of a house and its contents are required, steam or sulphurous acid should be used, and that under the supervision of a health officer.

Having stated what Cholera is, its localizing causes and best means of prevention, we will give a short synopsis of the first stage of premonitory symptoms, and would recommend in all cases if they should appear, not to depend on any advertised specifics or quack nostrums, but immediately to send for a physician.

PREMONITORY SYMPTOMS

are generally lassitude, dull pain above the eyes, disturbed digestion, abdominal uneasiness, slightly coated tongue, and a painless and watery diarrhea. This diarrhea occurs in a very large proportion of the ordinary cases, and continues for several hours to some days before the full development of the disease. A painless diarrhea at the time of Cholera epidemic is the most important symptom of the disease, and requires immediate and prompt treatment, or it will more probably terminate fatally than otherwise.

