

**DISCOVERY OF THE
CAUSE, NATURE,
CURE AND PREVENTION
OF EPIDEMIC CHOLERA**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649279722

Discovery of the cause, nature, cure and prevention of epidemic cholera by M. L. Knapp

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

M. L. KNAPP

**DISCOVERY OF THE
CAUSE, NATURE,
CURE AND PREVENTION
OF EPIDEMIC CHOLERA**

DISCOVERY

OF THE **Lane Medical Library**

CAUSE, NATURE, CURE AND PREVENTION

OF

EPIDEMIC CHOLERA:

BY

M. L. KNAPP, M. D.

LATE PROFESSOR OF MATERIA MEDICA, AND PRESIDENT OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF THE UNIVERSITY OF IOWA; LATE PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN IN RUSSIAN MEDICAL COLLEGE; AUTHOR OF "LECTURES ON THE SCIENCE OF LIFE INSURANCE," ETC. ETC.

[Reprinted from the New York Journal of Medicine for January, 1855, with an Appendix of new matter.]

CINCINNATI:
PUBLISHED BY H. W. DERBY.

1855.

[Copy Right Secured, according to Act of Congress.]

PRINTED AT THE COLONIAL OFFICE.

MAI

126
168
1855-

DISCOVERY
OF THE
CAUSE, NATURE, CURE AND PREVENTION
OF
EPIDEMIC CHOLERA.

TAKING a survey of the human family inhabiting this earth, it is the work of but a moment only, to examine the several agents in the material world that support them in life and maintain them in health: food and drink, atmospheric air, heat, light and electricity, are all.

Medium, or modern impressions of these agents necessary to life, or vital stimulants, maintain a physiological state, or the condition of comfort, buoyancy and happiness, called health. Any other than medium, or moderate impressions, either in force or quality, especially if long continued, induce a pathological state, or a condition of discomfort and tendency to death, called disease. It is to be observed, however, that a considerable variation is compatible with health, especially if neither sudden nor long continued. Man is most comfortable, for instance, in a temperature of about 65 degrees F., but he can withstand 100 degrees if not long continued, or 20 degrees below zero. So of all the vital stimulants, moderation is the law of health. But the earth must wheel its stated course around the sun, producing the phenomena of the seasons; hence, man must be subjected to extreme impressions in summer and winter, and the vegetable kingdom to drougths, frosts and blights, abridging the vital stimulus of food. These are the laws of Nature, and in them are involved the causes of disease. No other external influences are known, or acknowledged to be present in the

59265

physical world, by which the health of human beings can be disturbed, and cannot be admitted without hypothesis.

Discarding all the hypothetical causes of Cholera that may have been offered, such as contagion; infection; epidemic influence; an imaginary entity, possessing the quality of portability; astral influence; malaria, or miasmata, (whether vegetable fungi, or animalculæ); teluric emanations; supernatural agency, called the displeasure of Providence, or the vengeance of God; I look only to known, natural causes of disease, or extreme impressions of the natural vital stimuli, for the cause of Cholera, and a rational explanation of all the phenomena it presents.

Deviations from a healthful standard, in the impression of the vital stimulus of food, or alimentation, constitute one class of causes of disease.

On this proposition I remark, that the natural law, governing man as an *omnivorous* animal, is as imperious as that which has ruled the ox, *herbivorous*, or the tiger *carnivorous*. Infractions of this law call for a penalty; and it is as much a violation of it to withhold *all kinds*, or a variety of animal and vegetable food and fruits from man, as to stall-feed an ox on meats, or to graze a tiger on clover.

Deviations from a healthful standard, in the impression of atmospheric air, constitute another class of causes of disease.

On this proposition I venture the remark, that this source is most accused, but least at fault. Oxygen is tempered by nitrogen to a suitable medium standard for life and health, and the vegetable kingdom is continually absorbing its accidental impurities, and exchanging pure air: maintaining it in *statu quo*, or at the healthful natural standard. It is impossible for more than merely confined localities to have an impure air, and ventilation quickly corrects the evil.

Deviations from a healthful standard, in the impression of heat, light and electricity, always united, so far as science reveals, constitute a third class of causes of disease: these second and third classes are called meteoric classes.

On this proposition I remark, that the power for good or evil of this class of vital stimulants, as manifested in the annual variations of the seasons, is more remarkable upon the vege-

table than animal kingdom. Man being enabled to heat up his system by oily, animal food in winter, and to avert, measurably, the discomfort of the high temperature of summer, by a diet of cooling, acid fruits, can, by studying the laws of diet, greatly accommodate himself to these exigencies.

Here then, this important matter is narrowed down, and presented to our common sense under three heads, embracing all known external influences in the material world capable of producing disease; and it follows, as a matter of course, that the cause which produces Cholera is to be looked for in one, or in two, of these sources, or in all three united. Now, it seldom happens, according to general observation, that great sickness and mortality occur, without the combined and co-operating influence or agency of these three causes, one acting as the remote or predisposing cause, and the other two as exciting causes. The question, then, naturally propounds itself here, Which of these causes is most probably the remote cause of Cholera?

Looking at the phenomena as presented in the spread of Cholera, the two meteoric classes of causes named, covering high solar heat or insolation, vitiated air, vicissitudes, or sudden changes from heat to cold, and *vice versa*, humidity, rains, gales, tempests, thunder-storms and the barometrical phenomena noticed, appear in immediate connection with its outbreaks, progress or aggravation, and are not only generally considered, but are universally held and conceded to be, its *exciting* causes. Hence it follows, that some error in the vital stimulus of alimentation is the *remote* cause of Cholera: there is no other remaining source in the world from whence to derive it.

Forced to this conclusion by sound logic, I would ask in the next place, Does the error in the vital stimulus of food, which produces Cholera, most probably come of a profusion, a poisoning, or a scarcity? All the world will answer the latter; for the poor and destitute are its special victims, while the rich, having means to purchase plenty and variety, though prices be high, and so to fulfill the omnivorous law, usually escape; and under a general poisoning of the food, rich and poor would indiscriminately fall. Furthermore, the

population of a country holds in the ratio of its productions : famine is always followed by pestilence. Hence I am forced again, by universal observation, and the axioms of political economy, to conclude the error arises from an abridgment ; and as the vegetable kingdom is most obnoxious to the meteoric influences causing blights, I infer the difficulty lies in an abridgment of the vegetable productions and stores, or a scarcity in kind, leaving the poorer classes on a cheap, stale, refuse, animal, coarse, *one kind of diet* without succulent vegetables.

Glancing now at medical history, it appears that down to near the close of the last century, from time immemorial, a peculiar form of disease, called scorbutus or scurvy, was the great scourge of mankind in all parts of the world, destroying more lives than all other causes of death put together, wars and accidents included. The same mystery enshrouded its nature, its cause, and its spread, that now hangs over Cholera ; the same bewilderment and confusion prevailed at the bedside ; all the causes that have been conjectured to produce Cholera, were conjured up, marshalled, and arrayed under plausible, specious and imposing hypotheses, and set down by their respective advocates as the causes of scorbutus ; but at last, the simple truth forced itself upon the world, that the cause of scurvy was some error in the vital stimulus of food ; and it is now well enough ascertained, that the error consists in the absence of succulent vegetables ; let these be wanting or even but partially wanting, for any considerable length of time, and, no matter what the diet in other respects, scurvy will make its appearance. (*Budd.*) A return to the free use of succulent vegetables and fruits, and this course pursued, will arrest and cure the disease. For the last sixty years this disease has been measurably and apparently banished, or so held at bay, or modified by the inculcated free use of succulent vegetables, fruits and their juices, that it is not known or recognized when it does make its appearance, and its presence is not dreamed of, when but partially developed, although a whole community, municipality or nation, may be under its power and evil influence, and all forms of disease dreadfully aggravated by its presence.

"We have seen," says Dr. Budd, "that the approach of scurvy is gradual, and that prolonged abstinence from succulent vegetables is necessary for its full development; but it is our opinion that something short of this, that a condition which might be correctly designated a scorbutic taint, must often occur in the lower classes in towns, but especially in prisons and asylums, towards and at the close of long winters, when succulent vegetables are scarce and expensive. Such a condition of the system would necessarily modify the character and course of supervening acute diseases; and it is worthy of most diligent inquiry, whether that form of scarlatina denominated *maligna*, and analogous types of other eruptive diseases, may not, in some cases, owe their peculiar aspect and character to the circumstance of a scorbutic taint already existing, when the system becomes subject to the specific poison of these several diseases. A fact which renders this probable is, that these types prevail most during and at the close of long winters. We may here notice the extraordinary prevalence of typhus in the severe winter of 1837-38, and the petechial character of that epidemic. Sir Gilbert Blane has remarked that the low spotted typhus is always most prevalent in long and severe winters. Willan also states, that the malignant form of scarlatina is usually limited to the winter months. The following paragraph, from Huxam's essay on small-pox, may also bear on this subject: 'I have never observed either the *vegetable or mineral acids* of any great service in the crude crystalline pox, but I have often found them highly useful in the *small black confluent kind*, with *petechiæ*.' It appears to us, also, that by the common practice of physicians in many chronic diseases, patients are kept far too long a time on a diet consisting of farinaceous food. When a moderate use of succulent vegetables is considered prejudicial, it would be advisable to supply the patient with their equivalent, namely, a certain proportion of orange or lemon juice." (*Tweedie's Practise*.)

Thus the experience of Dr. Budd, and others, fully confirms the observations of the writer, that scurvy underlies and aggravates all forms of disease, that are developed towards the close of winter and through the spring, and,