

**A REPORT ON HOSPITAL
GANGRENE, ERYSIPELAS
AND PYAEMIA**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649432134

A Report on Hospital Gangrene, Erysipelas and Pyaemia by M. Goldsmith

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. GOLDSMITH

**A REPORT ON HOSPITAL
GANGRENE, ERYSIPELAS
AND PYAEMIA**

A REPORT
ON
HOSPITAL GANGRENE,
ERYSIPELAS AND PYÆMIA,
AS OBSERVED IN THE

DEPARTMENTS OF THE OHIO AND THE CUMBERLAND,

WITH CASES APPENDED.

BY M. GOLDSMITH,
Surgeon U. S. V.



PUBLISHED BY PERMISSION OF THE SURGEON GENERAL U. S. A.



LOUISVILLE:
BRADLEY & GILBERT, CORNER OF THIRD AND GREEN STREETS.

1863.

B

LANE LIBRARY

2000

1863
G 62

REPORT.

LOUISVILLE, KY., Sept. 1st, 1863.

To Brig. Gen. W. A. Hammond, Surg. Gen. U. S. A., Washington, D. C.:

SIR—

The investigations which have been conducted in this city in relation to hospital gangrene, erysipelas, ichorrhæmia, thrombus, metastatic abscess (pyæmia,) diphtheria, and gangrenous scarlatina, have had for their objects to ascertain :

First, the nature of the causes operating to the production of the diseases ; Secondly, the nature of the process set in motion ; Thirdly, the prophylactic and curative agents.

The affections just named are, in some of their aspects, so intimately united on the points touched in these investigations that it is impossible to disunite them for the purpose of description.

The opportunities presented in the Military Hospitals of this city for the study of some of these diseases have been great, especially so in regard to hospital gangrene. For the study of diphtheria and scarlatina, except in connection with wounds, the occasions have not been numerous in these hospitals, the cases having been isolated and few. Indeed more cases have occurred in private than in public practice. Enough, however, have been observed to justify the conclusions expressed in the following pages. The report of the cases of scarlatina and diphtheria will form the subject of a separate paper.

Hospital gangrene, erysipelas, gangrenous diphtheria, and scarlatina, viewed as local diseases, present, on careful study, many points of resemblance ; nor are they unlike in the constitutional states wedded to them. These resemblances are marked.

In diphtheria we notice the transformation of the exudate into a diffuent pulp, the erosion of the subjacent tissues, and the exuding of erosive sero-purulent fluid, excoriating the skin and mucous membranes. In scarlatina, we observe the production of sloughing, or ulcerous surfaces, exuding also corrosive sero-purulent discharges. Both diseases evolve a disgustingly putrid odor. Hospital gangrene always presents pulpy, diffuent sloughs; exudes thin sero-purulent discharges, corroding the skin where they overflow the confines of the sore; and emits a pungent putrid odor. Erysipelas, when it runs on to the destruction of the cellular tissues, is attended with like phenomena.

Erysipelas and hospital gangrene would seem to be cognate; and although, in some of their clinical aspects, they do not show a great similarity, yet a careful study of the following columns, setting forth the points of similarity and dissimilarity, will convince the reader that they are more akin than appears at the first glance:

ERYSIPELAS.

1st. Attacks skin and cellular planes (succulent tissues.)

2d. Does not readily involve tendons, fasciæ, &c., (dry tissues.)

3d. Spreads along the skin and cellular planes.

4th. In the cellular variety presents necrosis of cellular substance, in diffuent sloughs.

5th. When attended with necrosis of the cellular tissue, exudes corrosive fluids. The yellowish fluid produced in the phlegmonous variety contains no pus or other cells; the

HOSPITAL GANGRENE.

1st. Attacks skin and cellular planes (succulent tissues.)

2d. Does not readily involve tendons, fasciæ, &c., (dry tissues.)

3d. Spreads along the skin and cellular planes, most readily and rapidly.

4th. In all tissues which it attacks presents pulpy, diffuent sloughs, (except in bones?)

5th. Exudes corrosive sero-purulent discharges, excoriating the skin. The yellowish fluid, which can be pressed out of gangrenous sloughs and sores, contains no pus or other

constituents seem to be fine granular matter, the debris of connective tissue, and a few fibres of inelastic fibrous tissue.

6th. In the cellular variety, emits putrid odors.

7th. Is contagious and infectious.

8th. Is frequently complicated with thrombus.

9th. Leads occasionally to ichorrhæmia.

10th. Is producible by inoculation with putrefying animal matter, as well as some of the gaseous products of putrefaction.

11th. Arises in over-crowded and ill-ventilated wards.

12th. The empirical remedies addressed to the constitutional state are: Tinct. mur. ferri, quinine, alcohol, etc., (antiseptics.)

13th. Local remedies are: iodine, creosote, tinct. mur. ferri., sulph. ferri., etc., (antiseptics.)

constituents seem to be fine granular matter, the debris of connective tissue, and a few fibres of inelastic fibrous tissue.

6th. Emits putrid odors.

7th. Is contagious and infectious.

8th. Is frequently complicated with thrombus.

9th. Leads almost constantly to ichorrhæmia.

10th. Is producible by inoculation with putrefying animal matter, as well as by some of the gaseous products of putrefaction.

11th. Arises in over-crowded and ill-ventilated wards.

12th. Empirical remedies addressed to the constitutional state are: Tinct. mur. ferri., quinine, alcohol, etc., (antiseptics.)

13th. Local remedies are: nitric acid, creosote, chlorides, charcoal, &c., (antiseptics.)

In the present state of our knowledge, we regard the local manifestations of erysipelas, of scarlatina, and of diphtheria, as being preceded by and as depending upon certain blood states. In this aspect some resemblance is noticeable: all three of these diseases seem to have their characteristic expression on the tegumentary surfaces.

Erysipelas is no unfrequent complication of both scarlatina

and diphtheria. They are all adynamic diseases, and present to chemical examination analogous changes in the blood.

Of the causes which operate in producing erysipelas, this much is known: Erysipelas is often the product of dissecting wounds—of wounds received in skinning diseased cattle, or in skinning the putrefying carcasses of those killed by accident. It is often seen to result, in the form of puerperal peritonitis, from the infection upon the hands of the midwife, as in the historical German cases. It is often associated with injuries and diseases of the bones, especially with caries, a disease remarkable for the persistent fetor of the discharges. Indeed all that is known with regard to the artificial production of erysipelas may be summed up in the agency of putrefying animal matter.

Erysipelas, too, seems to be engendered in over-crowded and ill-ventilated apartments, reeking with foul emanations of the human body; in rooms receiving exhalations from drains and cess pools, especially from the former. It is producible by miasm emanating from the bodies of those having the disease. The bodies of those having erysipelas, in some of the worst epidemics of the disease, have been known to emit a putrid odor.

The bodies of those who die pass quickly into putrefaction; and in the blood of such, there is often found lactic acid, a product of putrefactive decomposition. The whole drift of testimony goes to show that erysipelatous diseases are more or less connected with putrefactive processes; and although it may not be possible, in the present state of our knowledge, to establish the precise relation between the two, enough is known to make it certain that an intimate relation exists.

Of the causes which produce hospital gangrene, this much is known: Hospital gangrene arises spontaneously in wards where the wounded are crowded together—where the wards are filled with the stench of traumatic profluvia, and receive the air of sewers and cellars.*

*I beg leave to interpolate here an extract from a report made by me to the

It is produced by inoculation; and there is reason to believe that it is producible by keeping the putrid flesh of healthy animals in contact with a wounded surface. The poison spreads through the medium of the atmosphere, and adheres with great endurance and tenacity to fomites. That the gangrenous process—the spread of the gangrene—is propagated by the ever produced new gangrenous matter, is obvious to the most superficial examination.

As to the mode of operation of the agents producing erysip-

Surgeon General in regard to the indigenous production of hospital gangrene in the hospitals at Nashville: "I find that in Hospital No. 8 there have occurred, according to the best evidence in reach, thirty-eight (38) cases of hospital gangrene, of indigenous origin; meaning, by indigenous origin, those cases not produced by infection, as where a man having been brought into a ward with hospital gangrene imparts the gangrenous process to the wounds of other men.

The facts are briefly these:

- 1st. All of the cases occurred in Ward No. 1.
- 2d. All the cases occurred in the row of beds next the windows opening on the alley.
- 3d. All the cases occurred prior to the 24th of April, or during the time when the external atmosphere was colder than that of occupied houses, closed cellars, or underground drains.
- 4th. The cellar under the hospital had passing beneath it, and opening into it by several apertures, the common sewer of that part of the city.
- 5th. The soil pipes from the privies of the several wards traversed this cellar, and emptied without a trap into the common sewer.
- 6th. This soil pipe is made of tin and leaks badly.
- 7th. In wet weather the cellar bottom is overflowed by the contents of the soil pipe and sewer.
- 8th. This cellar has but two openings, one in the front of the building and one in the alley.
- 9th. The alley is long, narrow, and the hospital buildings and barracks high.
- 10th. The area of the adjacent building receives the drainings of the garbage of its kitchen, and this area forms a part of the alley.
- 11th. Ward No. 1 derives its ventilation almost entirely from windows opening on the alley. On the opposite side there is but one opening, a door leading to a hall which has no window. On the end next the street there are but three windows.
- 12th. The prevailing winds during cold weather sweep the street in the front of the building, leaving the atmosphere in the alley almost undisturbed.
- 13th. The emanations from the area of the adjoining building, as well as those from the cellars of the Barracks and Hospital are most offensive at all