

On the origin and development of the diseased condition of the intestinal glands : which occurs during the course of certain forms of continued fever.

Contributors

Goodsir, John, 1814-1867.
Royal College of Surgeons of England

Publication/Creation

[Edinburgh] : Balfour and Jack, Niddery St, 1842.

Persistent URL

<https://wellcomecollection.org/works/xzdgrjxm>

Provider

Royal College of Surgeons

License and attribution

This material has been provided by This material has been provided by The Royal College of Surgeons of England. The original may be consulted at The Royal College of Surgeons of England. where the originals may be consulted. This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

ON THE
ORIGIN AND DEVELOPMENT

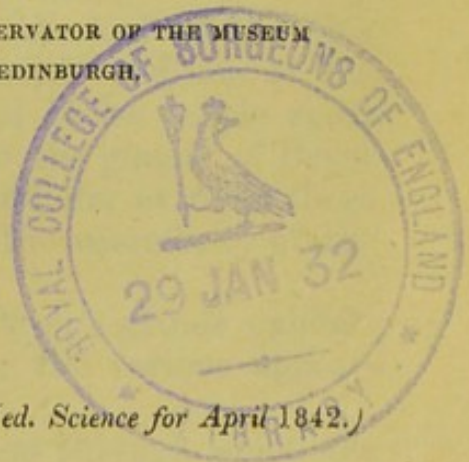
OF THE
DISEASED CONDITION

OF THE
INTESTINAL GLANDS,

WHICH OCCURS DURING THE COURSE OF CERTAIN FORMS OF
CONTINUED FEVER.

By JOHN GOODSIR, Esq.,

MEMBER OF THE MED.-CHIR. SOC. OF EDINBURGH, CONSERVATOR OF THE MUSEUM
OF THE ROYAL COLLEGE OF SURGEONS IN EDINBURGH.



(Extracted from the Lond. and Edin Monthly Jour. of Med. Science for April 1842.)

(17)

ON THE

ORIGIN AND DEVELOPMENT

OF THE

DISEASSED CONDITION

OF THE

INTESTINAL GLANDS,

WHICH OCCUR DURING THE COURSE OF CERTAIN FORMS OF
CONSTITUTIONAL DISEASE.

BY JOHN GOODER, M.D.

PHYSICIAN TO THE GENERAL DISPENSARY, AND
OF THE GREAT HOSPITAL OF ST. MARK'S, LONDON.

LONDON: PUBLISHED BY B. B. BLACKBURN, 15, N. BROADWAY, 1861.

BALFOUR AND JACK, PRINTERS.

ON A
DISEASED CONDITION
OF
THE INTESTINAL GLANDS.

(Read before the *Med.-Chir. Soc.*, February 1842.)

Without entering upon the question, as to whether the subject of the present paper constitutes a distinct species of disease, or be merely a form of the ordinary continued fever,—a question which I am quite satisfied will never be answered, so long as each pathologist confines the inquiry to the fever of his own district, without connecting with it the consideration of those forms of fever which occur in every separate district of a country or continent,—I shall proceed at once to describe a lesion which I observed some time ago in a disease which I was led to consider as typhous or continued fever.

On opening the abdomen of individuals who had died of this fever, we could always recognise the diseased condition of the internal surface of the gut, by the elongated bluish purple spots on its peritoneal surface, corresponding to the glands of Peyer on the internal surface; and this we could do, even in those cases in which, from other circumstances, the vascularity of the parts had disappeared after death.

On laying the gut open, the patches of Peyer's glands exhibited, according to the standing of the case, the various appearances which I shall now describe.

But before proceeding to detail the phases through which the patches pass, from the first appearance of the disease till the establishment of the typhous ulcer, or of perforation, I may remark, in regard to the condition of the mucous membrane in the neighbourhood of the patches, that it did not in every case exhibit unequivocal traces of inflammatory action. It might be

highly congested, or it might be perfectly bloodless in cases of well developed disease of these patches. I cannot say that I have often observed the mucous membrane pulpy or softened. The villi and follicles of Lieberkuhn have always appeared to me to be healthy. The vascularity, when it did occur, was met with principally in the neighbourhood of the glandular patches, and resembled in all respects that described and figured by Dr Bright in his report on the form of fever lesion now before us.

The commencement of the disease is first announced by the smaller patches becoming slightly elevated, so as to be hemispherical or conical, and by the more extended groups assuming a table-like appearance, with perpendicular edges, as if a flat plate had been placed on the mucous surface. The colour varies according to the case, from bright carmine red, to dark purple or black, continuous, or in patches. In the more vascular specimens, the colour is a yellowish grey, contrasting with the dead white or greyish white of the intestinal surface. More closely examined, the surfaces of the patches exhibit as usual, the follicles of Lieberkuhn and villi, differing in no respect from those on a healthy surface, and arranged around the vesicles of the patch in the usual manner. An examination of this kind must be made under water, and when conducted in this manner, the vesicles of the patch may be seen, by floating aside the membranous border and circle of villi which surround each of them. The vesicles themselves may thus be seen to be much distended with a yellowish matter—a distension which is now perceived to be the immediate cause of the elevation of the patch.

In the second stage of the disease, the patches still continue to rise above the surrounding surface, and to exhibit the changes formerly described, in a more characteristic manner. As the elevation increases, a change begins to take place on the elevated surface. This change may be partial, that is to say, it may take place sooner on some parts of the patch than on others, but generally it extends over the whole surface, and is bounded by a line situated from a 10th to a 16th of an inch from the edge of the patch. The change itself consists in the surface beginning to alter in colour, becoming dirty yellow or grey, and assuming a peculiar undulating or contorted surface, like a bit of leather seared with a hot iron. The villi have now in a great measure disappeared, but the orifices, or rather the circular folds, or pits, in which are situated the vesicles, are still visible. At last, the confines of the changed portion of the patch are rendered evident by a groove apparently produced by ulceration, which, appearing here and there on these confines, at last extends all round, and indicates some change about to take place in the whole arrangement of the parts.

In the third stage, the groove just described makes its way

into the tissues; and as it does so, the healthy but elevated mucous membrane on its external edge, gradually everts itself, as if by the upward pressure of the matter beneath it. While this is going on, the edges and surface of the altered portion become more rugged, and their former character somewhat obscured. The altered portion, which now assumes very much the appearance of a slough tinged with intestinal matters, becomes more and more detached from the surface to which it adheres. When the mass is gently raised under water, it may be observed that its attached surface sends processes down into the cellular membrane beneath; and if these processes be carefully drawn out, they will be found to correspond each with one of the original vesicles of the patch. When detached in this manner, they leave on the surface to which they adhered, dimples, or rather pits, which may be recognised as being the cellulo-vascular sheaths of the patch vesicles.

Occasionally the free surface of the altered portion comes away first, in the form of flocculent laminae, and the deep processes continue to be attached for some time in the cellulo-vascular capsules, like little nodules or pellets of a rounded or pyriform shape.

The altered portion, even immediately before detachment, may still present on its surface traces of its original structure. The orifices of the follicles in which the vesicles are situated are visible here and there on the surface, and the membrane retains sufficient consistence to bind the mass together.

Fourth stage. When the sloughy mass has separated, the surface of what may now be called an ulcer appears flocculent; but, when examined under water with a couple of needles, a number of foveæ, the remains of the cellulo-vascular capsules, may be observed on it. In some of these, the little pellets of deposit may still remain attached, appearing like mustard-seeds scattered over the surface. The edges of these ulcers are thick and everted, and exhibit the natural structure of the mucous membrane. In some ulcers the eversion of the edges proceeds so far as to throw the mucous surface of the edge completely over, so as to apply it to the surrounding mucous membrane.

Fifth stage. The ulcer may now heal, or proceed to perforation of the gut. In the former case granulations, I presume, appear, and the reaction of these cellular elements carries on the contraction and cicatrization so well displayed in some of the preparations on the table. In the present form of ulcer, as in others affecting the mucous coat of the bowels, it is some time before villi again make their appearance on the cicatrized surface; but these changes I have not watched or observed. When the ulceration proceeds towards perforation, it is generally one spot of the patch which is more particularly affected, the rest of

the ulcer retaining its former granulating or flocculent appearance. At this stage of the process lymph begins to be deposited on the external surface of the gut; and if the patient survives the perforation eight or ten hours, the lymph rounds off the edges of the hole, and gives it that punched-out appearance so frequently observed. The omentum may adhere opposite the incipient perforation, and after contraction has concluded, it appears as if it had been forced from without into the hole, an appearance resulting from the contracting agency of the granulations.

Having now described the changes which the patches undergo in this form of disease, I have to point out the peculiar matter upon the presence of which these changes appears to depend. The grey matter which fills the vesicles or the spaces which they occupy, I find to consist of that universal element of every primitive tissue, healthy or diseased, nucleated cells. These cells are from 2000 to 4000 of an inch in diameter. They do not in general exhibit a nucleus in the sense in which that term is generally applied; that is, the individual cells do not present in their interior smaller cells holding certain relation to them. These cavities appear to contain a number of granules, four, five, or six, as far as could be reckoned. Whether these in the aggregate are to be considered as a nucleus proceeding towards the formation of a number of young cells, or whether the appearance is to be considered as analogous to that irregular form of nucleus and cell-contents characteristic of certain forms of tubercle, I do not know. This matter, of whatever nature it may be, appears first in the vesicles of the patches, and then spreads out on all sides, after the manner of other purely cellular structures, till the whole patch, before it is thrown off, appears to be principally formed of it; the surface of the mass, however, as has been stated, and certain parts of its interior, consisting of the somewhat altered mucous and submucous tissue.

The morbid changes which the *glandulæ aggregatæ* of the ileum undergo during continued fever, appear, from the observations I have just detailed, to be of the following nature, viz. the development of cells within the constituent vesicles of the patches to such an extent as at last to burst them, or cause their solution—the continued increase in the number of the cells, proceeding from as many centres as there are vesicles in the patch—the conglomeration of the whole into one mass above the submucous and under the mucous membrane—the distension of the latter, and the necessary ulceration and sloughing of the mass arising from this circumstance.

The whole mass, as detached from the gut, is not therefore to be considered as a slough; that portion only which consists of the upper halves of the vesicles and of the mucous membrane, being dead, the greater part, consisting of the cellular mass, being

merely detached from the submucous tissue, and consists of those nucleated cells, which, at first confined within their generative vesicles, had at last vegetated so much as to break their natural bounds, and to become one mass of cells, constantly increasing in numbers, except below, where the separate centres from which they originally proceeded are indicated by the processes and little pellets which are situated in the remains of the vesicle capsules.

It will have been observed that I have not employed the term "*inflammation*" in the course of the description I have just given. Whether the changes I have described originate in inflammatory action or not, of this I am certain, that the ulceration and pseudo-sloughing is an immediate effect of the distension from the submucous vegetating mass, and would occur whether the latter were produced by inflammation or not.

In regard to the history of this department of the morbid anatomy of fever, I may state, that Dr Bright has given very beautiful representations of the sloughs and ulcers in his *Reports of Medical Cases*. Louis and Chomel have referred to the appearance of the matter which distends the glands, and compared the process to the tuberculous. Schönlein, in his *General Pathology*, has made a general allusion to the deposit, and to the changes which occur in the patches.¹ Gruby, in a work on the *Microscopic Character of Morbid Products*,² was the first, as far as I can learn, who figured and described the cells of which the deposit consists. Finally, Rokitansky³ has generalized the subject, and considered the matter deposited as peculiar to typhus fever, and referable to the same category as cancer, tubercle, &c.

My own observations have been made without reference to any hypothesis as to the pathology of fever.

¹ Schönlein allgemeine und specielle Pathologie und Therapie Zweiten Theile. 1839, p. 23.

² Observationes Microscopicæ auctore Dav. Gruby, 1840, p. 44.

³ Rokitansky. Handbuch der Pathologischen Anatomie, band iii. p. 265.

