

**On some important points connected with the pathology of puerperal fever
/ by Alexander John Hannay.**

Contributors

Hannay, Alexander John, -1846.
Royal College of Surgeons of England

Publication/Creation

Glasgow : W.R. M'Phun, 1827.

Persistent URL

<https://wellcomecollection.org/works/k75c9ad7>

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>

Dr Ferguson

(2)



To D. Ferguson
with the respectful compliments of
A. H. H.

ON SOME

IMPORTANT POINTS

CONNECTED WITH

THE PATHOLOGY

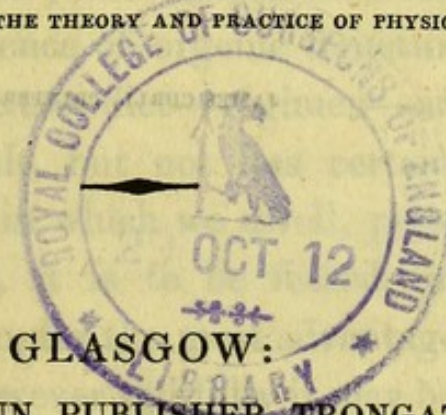
OF

PUERPERAL FEVER.

BY

ALEXANDER JOHN HANNAY, M. D.,

MEMBER OF THE FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW;
LATE PRESIDENT OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH; AND
LECTURER ON THE THEORY AND PRACTICE OF PHYSIC.



GLASGOW:

W. R. M'PHUN, PUBLISHER, TRONGATE.

1827.

Handwritten text at the top of the page, likely bleed-through from the reverse side.

ON SOME

IMPORTANT POINTS

CONCERNING

THE PATHOLOGY

OF

PURPURAE FEBRILIS

BY

ALEXANDER JOHN HANNA, M.D.

MEMBER OF THE SOCIETY OF PHYSICIANS AND SURGEONS, GLASGOW;
FELLOW OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH; AND
LECTURER ON THE SUBJECT OF PURPURA.

JAMES CURLL, PRINTER.

GLASGOW:

W. R. MUIR, PUBLISHER, TROGATE.

1857.

ON THE
PATHOLOGY
OF
PUERPERAL FEVER.

FROM the very limited views which we are permitted to take into the natural and sound structure, and functions of the human frame, much difficulty attends the investigation of the nature and exciting cause of diseases in general. The very numerous external causes which operate on these, and the modifications thereby produced,—around all which there has been thrown an almost impenetrable veil; the various modifications which age—the difference of organic structure and function in the sexes—diet—regimen—and last, not least, the occult, but not less certain influences of the climate in which we dwell, present so many obstacles, that, it is to be feared, investigation, though made under the most advantageous circumstances, and however skillfully it may be conducted, will ever fail in the full, clear, and explicit development of the thousand ills which affect mankind.

I would be far indeed from being understood to discountenance, by what I have said, that spirit of investigation by actual experiment, which is the true basis of philosophy, and before which the chimeras of fancy, and the hypotheses of heated imaginations, are dissipated as the misty cloud before the morning beam. On the contrary, I rejoice fervently in that ardent love of truth exhibited in latter days by all the enlightened members of our profession, which leads them to sacrifice every system,—every hypothesis, to the more certain guide of a well-regulated experience. The experience, however, acquired by one individual, although it may enlighten his own views, and render his own practice more successful, is diminished in importance, and the sphere of its utility much more contracted than it would otherwise be, unless he take some means of communicating it to others; and of conferring on mankind the benefits which his opportunities or his talents may have afforded or suggested,—that when death or his infirmities shall have removed him from the scene of his activities and usefulness, the benefits of his experience may not thus be for ever lost.

It undoubtedly is the duty, then, of every member of our profession, to communicate, for the sake of suffering humanity, the result of his experience;

and thus, that all should lay up, as it were, in one large store-house, their various accessions of knowledge.

Influenced by these views, I have selected, as the subject of an inaugural Essay, which, in compliance with a late enactment of the Faculty, is required of candidates for its honors, some observations on important points connected with the nature and treatment of Puerperal Fever. These observations have been suggested during the course of my obstetrical studies; but more especially during an arduous and anxious investigation of this disease in the autumn of 1823—when its epidemic rage spread anxiety, sorrow, and poignant distress, amongst the inhabitants of a village and vicinity on the western shores of Galloway.

It would be a wanton occupation of time to enter on any formal narration of the symptoms which characterize this disease, for with details of these the press has already teemed.

The nature of this disease—the organic derangements it produces—its power of spreading itself by contagion—the state of the lochial discharge—and of the mammary gland in its progress—are points, than which no others in physic have excited more discussion and discrepancy of opinion, if we except, and indeed this follows as a consequence, the mode

of treatment. My intention, therefore, is to confine my observations chiefly to the above points, as being those to which accidental circumstances, and my train of investigation, directed my attention ; but more particularly to the question involving the seat of the disease—or the various morbid appearances of organic structure it effects, as exhibited by dissection. And my omitting to describe the symptoms which this epidemic assumed, is less material, as they differed very little from those narrated in the works of authors who have described the disease as it occurs in other districts.

It usually made its appearance during the third period of 24 hours after delivery ; but to this there were exceptions, as in the cases of two women named Adair and M'Culloch, senior, whom the disease did not assail until the fifth period of 24 hours after delivery. It has been said, that the later it makes its attack, the less dangerous a form does the disease assume ; but of this opinion my experience does not give me an opportunity to judge. Of these two cases, Adair died, and M'Culloch recovered, but not without a protracted illness, and much suffering. In all the cases of the epidemic, amongst the first or earliest symptoms were severe *rigors* and the sensation of cold, whilst, to the feel of an attendant, the heat of the body's surface was much

above natural ; and, in one case, the thermometer, whilst the patient was complaining of cold, stood at 101° in the axilla. In three of the cases, I have noted, that whilst the body was in this state, a clammy sweat covered the surface ; but in the others the skin was dry, and communicated a pungent feverish sensation to the hand. In all, there was, at the commencement, severe head-ache ; and to the most, this preceded the pain in the abdomen, coming on almost simultaneously with the rigors ; indeed, in the cases of Adair, M'Culloch, and of two other women, Jacobs and Wither (of Cairn-garroch), the head-ache preceded the rigors, and continued throughout a most distressing symptom. The abdominal pain, in one unfortunate case, (of an unmarried woman,) preceded all the other symptoms ; but I could not ascertain this to have been the case in those patients to whom I was not called till the disease had been perfectly established. This certainly did not occur in those I had the charge of from the commencement, with the exception of the last mentioned case. In this poor woman the pulse was 120 immediately after delivery, nor did it abate in numerical violence until the symptoms began to ameliorate, when it gradually resumed its natural standard as the frame recovered its healthy functions. In the others, whom I saw immediately

after delivery, and who were attacked by this disease, I did not remark any inordinate rise of pulse, until the disease in question had assailed them.

Some have insisted that the suppression of the milk and lochia are symptoms which always occur in Puerperal Fever; others have considered it as never occurring in a real case of the disease; and if this suppression do occur, though in an affection resembling in other particulars the symptoms of the disease under consideration, some few, and these of high authority, consider it sufficient to mark the affection to be different in its nature from Puerperal Fever. Others, and with more propriety, I conceive, hold, that the suppression or non-suppression of these secretions, matters little as a distinctive character of the disease. In Jacob's case, the lochia and milk were early suppressed, as well as in Cumming's, Adair's, and M'Culloch's; in Wither's, M'Gown's, and two more cases, they were not at all affected, particularly M'Gown, who was suckling her infant but 12 hours before death put a period to her sufferings. In one case, the lochia were partially affected; now suppressed, now flowing; but the discharge seemed to have no critical influence on the disease, as a happy and a fatal event occurred to those labouring under both circumstances. In all, the pain of the abdomen

formed a very prominent feature of the affection ; but never amounted to that exquisite degree mentioned by many authors, *viz.* that a pressure so light as that of the bed-clothes aggravated the sufferings. The pain in all, too, had its intervals of comparative relief ; and in some cases, after bleeding, &c. or even without this, there was a cessation of the pain during a short period. In all the cases that came under my care, nausea and vomiting formed a part of the leading and most distressing symptoms. The tongue, as well as the posterior fauces, were red and fiery on all its parts at the onset of the disease, and ultimately became covered on the back with a thick white fur ; whilst the edges, and parts already mentioned, retained throughout, their red appearance. In one case, the tongue assumed the appearance of a dark piece of muscle, like a raw beef-steak. The countenance from the beginning exhibited extreme dejection, and great febrile anxiety, and assumed, on the approach of a fatal termination, that peculiar sharpness and nondescript cast which has been called after the Father of our Art.

A symptom, which frequently attends the affection in question, and a source of much distress and painful feeling, is the diarrhœa, accompanied, as it mostly is, with tormina and tenesmus. This symp-

tom was various as to its severity, its progress, continuance, and effects in the patients under my care; and in some it did not occur at all in the course of the disease. But as Mrs. Wither, who had no diarrhœa, sank under the disease, and a Mrs. Neilson, who had this symptom to a severe degree, recovered, little light is thereby shed on this point. M'Culloch, sen. and — Cousins, had no diarrhœa, and both recovered. I am obliged to confess it as my opinion, that, in the other cases, the diarrhœa, and all its painful concomitants, were the product of the mode of cure employed—a circumstance which I fear too frequently happens in the treatment of Puerperal Fever—but of this hereafter.

It has been said by some that its appearance is of no *critical* import; but I am induced to consider it as a symptom of great moment to attend to, both as denoting the greater extent, severity, and consequently the danger of the affection; for in all cases its severity augmented the sufferings of the patient, and showed, to me at least, that greater organic derangement had taken place—that more of the intestinal mucous texture had been involved in the disease than in those to whom it did not occur. When I state my views of the pathological nature and cause of this disease, the above statement will appear more distinct and intelligible.

OF THE COMMUNICATION OF THE DISEASE BY CONTAGION.

OF the contagious nature of this disease, much diversity of opinion has existed. Some have insisted strenuously, that it, in no case, is communicated by the contagious influence carried from one person labouring under it to another; whilst others refer almost every case to contagion, as its source.

In these extremes, as always happens, I am inclined to think there is at the same time much error and much truth: for I am induced, by the facts I shall detail, to infer, that the disease may at its origin be sporadic, and independent of contagion, and so generated, become the source whence, in epidemic rage, it may be communicated by contagion to others. This I shall illustrate by the cases of the epidemic which came under my view, and I think these fully warrant the conclusion I have hazarded. There is, with regard to its contagious or non-contagious origin, a similarity between Puerperal Fever and Typhus, in which we often see a case generated by exposure to cold, excess in spirits, and the other occasional causes

independent of contagion, giving rise to fomites, spreading its baneful influence through a very extensive circle ; and perhaps the same takes place in other diseases of a contagious nature.

As connected with this subject, it may not be improper, before entering into detail, to give a succinct account of the local situation and of the predominant atmospheric states of the village and neighbourhood where the epidemic prevailed ; especially since to these, and particularly to the latter, have been attributed, in no small degree, the origin of that peculiarity of the state of the constitution, giving rise to the disease in question.

The village is situated in a natural amphitheatre, formed by an abrupt termination of the elevated land of the Peninsula of Galloway, called the Rhins, which leaves a spot of about 100 acres, surrounded, on the land side, by these abrupt and precipitous natural bulwarks, and from which the only outlet is a narrow valley, entering about the centre of the semicircle. Through this outlet a rivulet flows past the village skirts into the sea, on the northern side. The village is quite close to, and but little elevated above, the sea, which forms its boundary on the west. The houses in general are good and comfortable, the inhabitants for the most part healthy to a degree, and many reach a

lengthened term of years. From circumstances, labour is in demand, wages are good, and provisions cheap; so that want or bad diet could not have contributed to produce the disease.

From the very confined and limited views which we enjoy, into the various atmospheric changes and their influences, though there be many reasons to believe that these are not without their effects, and very powerful ones too, on the animal frame, much ambiguity has arisen—much diversity of opinion has been hazarded as to the nature of these changes—their efficient causes—and the modes in which they affect the living system. Indeed, after much observation—much investigation into these physical changes, little progress, I fear, has been made towards our attainment of a just estimate of their efficient causes and influences. The atmosphere of this village is generally pure; and as the west and south winds prevail, wafting the breeze over the Atlantic Ocean, and up the English Channel, the temperature is not so liable to extremes, as more inland situations.

These westerly winds are, however, very frequently attended with rains, which fell more abundantly during the summer and autumn of 1823, than on many preceding years, as shown by records kept on this station, with every possible

accuracy and attention, during a period of many years. It is a circumstance remarked by several old and intelligent inhabitants, that atmospheric changes have of late years taken place ;—that some years ago the westerly winds were by no means so prevalent as now ;—and that rain falling during the blowing of a westerly gale, rarely failed to accompany or be followed by a change of wind to the north. This is now by no means the case, as my records of the weather show. What other occult changes may have also been effected, and operating on the human body, though it may be possible, nay probable, that such have occurred, is not in the least degree known to us.

The diseases prevalent during the summer, I was informed, were, in by far the greatest number of instances, affections of the abdominal viscera ; and the fever which prevailed at that time was characterized by the severity of the abdominal symptoms, of which, pain on pressure, and a tumid state, were by far the most frequent. After my arrival, I was consulted in many cases of what are commonly styled bowel complaints, diarrhœas, dysenteries, and choleras ; and I may add, that scarcely any of the puerperal patients escaped some slight symptoms of abdominal affection—so prone were these organs to become affected.

The first case of Puerperal Fever in the village, (though not the first I had seen in the country,) occurred to a woman of the name of Jacobs, (wife of a smith at present in the public works.) She had not been out of it for some time, and between her and those that were ill in the country, at a distance of six miles, no communication could have taken place. In her case, there cannot be any difficulty in assigning the cause, as she had imprudently indulged in spirits, had resumed her domestic duties on the second day after delivery, and thereby exposed herself to cold. To these causes her attack is fairly referable, without having recourse to contagion, which it is next to impossible to substantiate. During her severe and fatal illness, she was visited by numerous acquaintances and friends, and particularly by a woman of the name of M'Gown, then pregnant, who, on her (*i. e.* Jacobs') delivery, and previous to it, had been very assiduous in her visits and assistance. She was, on the third day after delivery, attacked with the disease, which in her likewise proved fatal. Candour, however, obliges me to say, that every precaution had not been adopted, as she was said by her neighbours to have changed her clothes too early after being brought to bed. I may remark, I never saw or attended

these women till the disease in question was established. Soon after M'Gown's attack, the midwife who gave her attentions in her confinement, and even whilst she lay ill, was called to a patient, to whom I was also called. The midwife attended in the same dress as that in which she attended M'Gown, and frequently went direct from the one patient to the other, a distance only of about 150 yards. The consequence was, M'Culloch was seized with the disease, although every precaution with regard to the other exciting causes was enjoined, and most scrupulously adopted, such as abstinence from all spirituous liquors, the maintenance of a proper temperature, and suitable diet. From this patient the midwife was called to another case, where she again attended in the same clothes, and to whom, on the third day, my father, (who occasionally practises medicine,) was called, and who afterwards desired my attendance to her, labouring under the same affection as the others. No precautionary measures as to diet, &c. had in this case been omitted. From a frequent and incessant communication with this last woman and a Mrs. Neilson,—nay, even actual contact the last day she was able to walk about, we may trace the origin of her attack of Puerperal Fever, to be noticed afterwards. Several facts, upon the report

of others, could be adduced, equally conclusive, which, together, have led me to the opinion I have formed. I forbear to insist longer on a point leading so much into detail, and involved in so much obscurity; though I deemed it my duty to state my impressions, and the grounds of my belief of the contagious nature of this affection.

To these cases, as an argument for the probability at least of the contagious nature of this affection, I shall briefly state the success that attended my means of preventing its spread to others. I urged the absolute exclusion of all who had visited those already affected, from the chamber of the woman in child-bed—attended myself to the change of my own apparel, and frequent ablutions—the avoiding of all irritating causes—and enjoined a moderate diet, and absolute rest. In five cases, where these prophylactic measures were adopted, I am happy to say they obtained a success equal to my most sanguine wishes, though none of them were distant from some one labouring under the disease. The same happy results did not attend an opposite line of conduct, I am at the same time sorry to add; for three caught the disease in all its malignity, to none of whom was my advice desired until the disease had made too firm a hold to cede to the use of remedies.

SEAT OF THE DISEASE.

MUCH research has been bestowed on the investigation of different textures, to develop the various changes they undergo from or during an attack of this disease. And did I not humbly conceive, that from the nature of my investigations, (from the course of examination I was induced to pursue into those organic states or changes, the disease in question effects,) I have been able to observe some appearances, which, if they have not escaped the scrutiny of pathological observers, have never found their way into any descriptions of the disease I have met with; had I not been induced by these considerations, I say, I should have been altogether silent on this point. In many of those authors who have written on Puerperal Fever, we have very accurate details of the appearances indicative of the existence of inflammatory action in the serous membrane of the abdomen, and to none can I refer with greater confidence for their accuracy and elegance, than to the descriptions in the work of my friend, Dr. M'Intosh of Edinburgh; yet to his, or any other work on the subject, do we look in vain, for an account of the effects of the disease in

question, on a tissue of great importance in the physiological as well as the pathological states of the body, and the derangements of whose functions form, in my opinion, the peculiar and prominent features or symptoms of this disease. I allude to *the mucous or villous texture of the alimentary canal*; and it may be remarked, that although we cannot obtain any proof of the existence of morbid changes of this last named texture from a perusal of the cases narrated in the works alluded to, on the other hand, we are not permitted therefrom to conclude, that those morbid states did not exist, as they do not, by a single hint, induce us to believe this texture ever became the subject of their investigation.

The investigations of those engaged in the study of animal life, show how important and extensive a part the alimentary canal plays in the animal economy, forming indeed, as has been expressed, a sort of character of this division of nature. If we examine attentively the functions of this organic apparatus, we see how intimately they are allied to the whole of the organs of the body, and indeed a very large proportion of the animal actions are adapted to, and employed in, the introduction of proper substances into the apparatus. It is not, then, astonishing, that the sympathies existing be-

tween these organs of digestion and the nervous system of relation and locomotive apparatus, should be numerous and important. Physiologists have long been acquainted with the powerful influences, which the various states of the stomach, as arising from plenitude or vacuity, from a state of ease or uneasiness of that organ, have had over the moral and physical constitution of all our species. To none can be unknown that drowsiness and weight of head, a general uneasiness, and often pains of the joints, which followed a too copious repast, whereby the stomach is too much loaded and irritated. Its importance is much increased, when we view it as the surface, to which are applied all the substances exhibited to affect the remotest part of the system. The study, then, of the mutual influences of the gastric system, and other organs, is of high importance; and is, in a measure, the study of pathology. To the high interest of it, in this view, Barthez bears his valuable testimony: "L'estomac," says he, "est de tous les visceres celui dont on voit le plus souvent dans les maladies de communications sympathiques avec les organes qui n'ont pas avec lui rapport sensible." It is to Broussais, however, that we owe a complete detail of the varied and important sympathies of the digestive organs; the application of this knowledge

to the investigation and explanation of diseases before his time buried in ignorance, or slurred over with all the carelessness of empiricism. The mode in which he explains his views, is first to take a survey of the healthy or physiological sympathies of the stomach, and other parts of the canal, during the process of digestion, exhibiting its sympathies in this state; thence he proceeds to the more intricate or morbid influences which it exerts, a peculiar excellence of his doctrines, whereby physiology casts an enlightening beam over pathology. When the process of digestion is going on, (to proceed in a detail of this physiological act,) many sympathies are developed, the heart and all the functions have an increased excitation, to which succeeds a general degree of debility of the organs; the brain, organs of senses, and muscles, loose a part of their activity, a drowsiness comes on, and the skin affords a sensation of chilliness, or slight rigors sometimes take place. The stomach receives, we observe, from the other organs their powers, whilst the aliments are converted into chyme. To similar phenomena, though varying in degree and mode, we observe it giving rise in its inflamed states, and those evinced often by proofs still more clear and conclusive. It is in its mucous texture, if not alone, at least in a great

measure, that the high degree of sensibility of the alimentary canal resides. For into the composition of this texture, enter a vast number of nerves and blood-vessels, endowing it with high vital powers and important influences on the other parts of the system. It is true the impressions it receives are not always recognized by our senses, but the organic structure of the whole body experiences the influences, which matters taken into it, through its medium produce, and moreover the modifications which it undergoes by the irritation of all the other organs are universally acknowledged. In fact, to use Broussais's own words, "l'estomac est la foyer ou viennent tomber tous les rayons de l'animal, ensuite il les reflechit;" and his pupils, Quemont and Caignou, illustrate this by the increase of power and energy, the increase of redness of the face, the increased activity of the nervous system, the cheerful aspect and sparkling eye, which follow the taking of a stimulant cordial; and exemplify the influences of the other organs over the stomach, by the modified state of the latter organ, produced by uneasiness, lassitude, and the painful sensation of exhausted limbs, in which the stomach is brought to sympathise; who has not personally experienced this state of the system, where, from fatigue and

exhaustion, the choicest viands failed to tempt his exhausted appetite? After having pointed out, in very general terms, the importance of the mucous texture of the alimentary canal, we resume the more immediate object of this division of the subject.

It has been contended by some pathologists, and those of no ordinary fame, that Puerperal Fever differs little, if at all, in its essential character and nature, from Peritonitis supervening in those who are not in the puerperal state; that it owes its severity and apparent peculiarities to certain conditions of the abdominal cavity during pregnancy; and that the same mode of treatment is indicated in both. On the other hand, showing the uncertainty and ambiguity as to the nature and true essence of this disease, pathologists of equal reputation contend for a peculiarity of character, wherein it differs from simple peritonitis, some attributing its peculiar character to a *complication* of the abdominal inflammation with an idiopathic fever, assuming the same appearances as those train of symptoms to which the name of Typhus has been given; whilst others consider the nature of this complication to be some specific, though *occult* causes operating on the constitution, rendered susceptible of their influences by the puerperal state. And thus do they bear direct testimony to the truth or

fact of the complicated nature of this disease ; but they have never yet, as far as I have known, condescended on any explanation, or set forth a solution of this important question satisfactory to others, and, I believe I may add, fully relied on by themselves. In the present improved and progressive state of pathological research, such inanities are not, however, to be received. The speculations of the closet must cede to the truths—the stubborn facts the scalpel discloses.

On a review and consideration of the cases detailed by pathologists, who consider the affection as an intense uterine or peritoneal inflammation, it appears to me that the severity and obstinate character these cases assumed, should have led them to search after the circumstances to which such severity and obstinacy of character was referable. The lengthened period of time many patients lingered out, should have induced them to remark some difference between the case of their patients and those labouring under a disease (simple or pure peritoneal inflammation) which is well known to run its course to a fatal issue in a very short period, unless professional aid be interposed,—did not the occurrence, the almost universal supervention of severe dysenteric symptoms early in the disease, point out even a still more marked distinction.

That the inflammation of the serous membrane of the abdomen constitutes a part of the organic affection in this disease—that its course must be arrested before the symptoms can cease and the patient pronounced convalescent—I shall not be understood, from what I have said above, to deny. Yet to the morbid states of this texture have our attentions been too exclusively directed; whilst those of a texture of superior importance in the economy have been entirely overlooked. Now, I with much deference contend, that I have vindicated its right, *a priori*, to some consideration in the disease in question, as well as in other diseases, whilst I trust I shall be able to show, that its morbid states, as displayed by *post mortem* examinations, fully warrant our taking into view, and minutely inquiring into the influences these morbid states may exercise over the disease under consideration, their importance in the scale of morbid phenomena presented by it, and the remedial means adapted to their alleviation or removal. It is impossible for me, so great is my estimate, (deduced from attentive consideration of the subject,) of the influences of the alimentary mucous tissue on the economy, to see it reduced to such a state of organic derangement as I have witnessed, without referring to it, if not as a primary cause of this as

well as *many* other fevers deemed of an idiopathic nature, at least as the cause of their severity and complicated character—without seeing in it a symptom or state of the body, demanding more attention than it has hitherto obtained.

The peculiar opportunities I have enjoyed during a long attachment to public institutions of vast extent, have given me the advantage of putting to the test of actual experiment, the views to which my studies of Barthez and of Broussais first initiated me; and, after numerous dissections, conducted with the utmost care, yet not unattended with the most repulsive, nay, nauseating circumstances, I am still the more firmly convinced of the frequency, if not the inseparable connexion of the various shades and degrees of inflammation or irritation of the abdominal mucous tissue with febrile diseases.

I have obtained, at various times, dissections of twelve cases of those who died labouring under the most marked and unequivocal symptoms of Puerperal Fever. In all these cases, besides the appearances so ably described, both in his work and in his lectures, by my friend Dr. John M'Intosh, as characterizing the inflammatory state of the peritoneal membrane, indications of violently increased action of the vessels of the mucous texture

of the intestinal canal never failed to present themselves.

In five of this number, ulceration, or at least abrasion of the *large intestines* to a vast extent, especially in the descending portion and sigmoid flexure, presented indubitable marks of the inflammatory state. In these, as well as in the other cases, the stomach had numerous dark red patches occupying more than half its surface. The remaining portion of the villous coat lining the stomach, being of a pale pink or of a dirty yellow colour, with dark brownish (or earth mould colour) patches and vascular ramifications observable on it; the whole of the stomach in general corrugated, and presenting an irregularly undulated appearance. The whole of the mucous tissue, in these cases, was thickened, and separated on the slightest friction from the subjacent texture, carrying along with it the vessels and patches above described—showing that the increased action was peculiarly confined to this tissue, for on the serous coat of the stomach, in several instances, the vascular ramifications were remarkably few. In all, the *duodenum* presented its mucous tissue highly injected with blood, assuming the appearance, in several, of a layer of red currant jelly spread over its surface, in which, owing to the general redness, no outline of

vessels could be traced, and affording the idea of an injected appearance, or resembling ecchymosis of this texture. The duodenum never failed, in any case I have seen, whatever may have been the state of the other abdominal organs, to exhibit the appearances described, though in some cases varying in degree. In more than one case, the injected appearances were confined to the margins of the valvular folds of this membrane, whilst very numerous outlines of vessels, representing an arborescent appearance, were to be seen over its whole remaining surface. The same appearances were observable, in various shades, throughout the remaining course of the small intestines, and at the termination of the ilium, in one case, numerous small abrasions or ulcerations presented themselves.

The *stomach* was, upon the whole, more variable, as regards the appearances indicative of increased action. In those who died early of the disease, its mucous tissue was not so generally injected as to appear a layer of coagulated blood, but was highly vascular. In those, however, who lingered longer, the injected appearances of the mucous membrane predominated; and throughout its surface, much increased vascularity was observable. In whatever portions of the alimentary canal these marks of high excitement prevailed,

the mucous coat was in general thickened, easily lacerable, and covered with a thickish rather opaque slime, by no means its natural or healthy secretion.

It is worthy of remark, that in these cases in which the ulceration or other marks of high irritation of the *colon* was found after death, the dysenteric symptoms were most distressing, appeared early in the disease, and baffled all remedial means ; and instead of bringing relief by proving a critical discharge, as some consider, were accompanied by an aggravation of the febrile symptoms, prostration and exhaustion of the vital powers.

Owing to the severity of the affection of the head, I was induced to examine the brain and membranes as often as it was permitted. In three cases not the slightest morbid appearances were remarked ; but in one poor woman, Mary Donachie, in Holm, whom I did not see till the fifteenth day after delivery, and I have reason to believe the eighth or ninth of the fever, and who, though much exhausted by previous disease, endured longer than her companions in misfortune, there was extensive suppuration of the membranes of the brain, a portion of itself as soft as paste, with increased vascularity surrounding this softened part as a centre. This woman presented the greatest mass of disease I ever beheld ; the head full of pus ; the

lungs full of tuberculous cavities and tubercles in various stages, (under symptoms of which she had long laboured;) and the abdomen filled with a yellowish grumous fluid, and flakes of coagulating lymph floating in the liquid, or glueing the intestines together into one mass, whilst the injected, vascular, and ulcerated state of the alimentary mucous tissue, especially that lining the large intestines, indicated that the mucous texture of these organs had not escaped the general diseased state.

In two cases, violent pneumonic symptoms supervened, indicated by painful and difficult inspiration, cough, and tough, viscid, glairy, expectoration, tinged with blood, the stethoscope affording the *rale crepitant* and *muqueux*, and a dull sound of the affected side, was emitted on *percussion*. In both these cases, hepatization of the lungs, and *engorgement* of its structure with blood, and puriform matter adhering to the bronchial membrane, showed the correctness of the diagnosis as to the state of the lung; and in one of these there were firm, apparently recent adhesions of the pleura.

REMARKS ON THE TREATMENT.

I shall now advert to a few points connected with the most essential part of the subject—the treatment of Puerperal Fever. I have attempted, as far as the limits of this Essay will permit, to exhibit the importance of the mucous tissue, both in a state of health and disease; to obtain for it a right to investigation of the part its affections play in this disease, and what these affections may consist in; and I have shown, as far as my dissections go, that such organic changes do take place as demand attention in the selection and exhibition of remedial means. I cannot certainly refer to authors, as I stated above, for an account of this membrane's appearances, and for a corroboration of my statements and reasoning, but to future investigation I fearlessly trust for a more open disclosure of these interesting matters than we have yet been favoured with.

Without, then, having recourse to the supposition, that the combination of symptoms denominated Puerperal Fever owes its aggravated charac-

ter to a complication with an essential or idiopathic fever, (and even of the existence of this, under any circumstance, I am far from being convinced,) we have a more demonstrable explanation of the severity and aggravated forms the disease in question assumes. Moreover, this view and these facts strike deeply at the root of the practice, even of the most experienced practitioners of the day, and lead to a line of practice in many points very different from that which prevails at present. Indeed, the *success* attendant on the practice of the most skillful, or, I may add, of the most fortunate, is by no means so flattering as to make its abandonment a cause of regret, or to prevent our researches after more certain and infallible modes of treatment.

When I first had the sole and unassisted charge of a case of this disease, I put in practice the measures recommended by the able teacher under whom I had studied, or by those authors on the subject, of whose works I had made a most careful perusal and study; and to exemplify the nature of the epidemic—the mode of treatment I adopted at first—the severity and unfortunate issue of the cases, I shall narrate the following case:—

Friday, 12th September, 1823, 8 p. m.—Mrs. Jacobs, aged 29, of a stout habit of body, and of a

sanguine temperament. Countenance flushed, expressive of much febrile anxiety, and labours under severe pain of head, more particularly of the forehead; nausea and anorexia, though no vomiting; thirst excessively urgent; tongue red round the edges, and a red streak runs on the *raphe*, the rest being covered with a white dry fur. Respiration hurried, (35 in a minute,) and performed with difficulty; pulse 120, wiry and small; heat of surface considerable, and the skin dry and pungent. Tenderness of abdomen increased on pressure; abdomen tumid, and somewhat tympanitic. *Lochia and milk suppressed*; urine scanty, and depositing a lateritious sediment; had a purge of *senna* to-day. After an easy and speedy delivery, on Monday night last, at 12 o'clock, she did extremely well till Wednesday afternoon, when she got up, sat at the fire-side for hours without any precautions; she also took some whisky punch; on the evening of Wednesday she was seized with the pain of head, soon after rigors, and slight pain of abdomen, which has gradually increased, now extending round to the back.

E, vena secta fluat sanguis prout ferat.

℥xx blood were drawn, when fainting and a relief of pain was effected.

℞. Tartar. Antim. gr. ij.
 Submur. Hyd. gr. iij.
 Pul. Cret. Comp. c. op. ℥i. M. et divide
 in chart. quatuor; quarum cap. una q. q. q. 4ta hora ex Decocti
 Aven. cyatho.

Foveatur abdom : assidue.

N. B.—Blood, in ten minutes after it was drawn, had a light greenish coloured fluid floating on its red surface.

Saturday, 13th Sept. 8 a. m.—Had some sleep during the night, and took her medicines regularly; considerable thirst, and said she was free from pain, which she thought the fomentations alleviated; was frequently purged during the night, and vomited a little after the first powder: she is now occasionally incoherent in her expressions, and articulates very indistinctly, tossing much about in the bed, and grinding her teeth; she says she has no pain, but pressing on the abdomen makes her complain; pulse 120, soft and full; tongue as last night; heat of surface, (which is dry,) above natural; eyes glazed, and sunk; the whole visage collapsed and sharpened in all its lineaments. On having a miscarriage some months ago, she is reported to have had a disease in which she became quite delirious. In the night she said she was hungry, and craved food: none was given. It was about 6 A. M. she was first observed to be incoherent.

Injr. statim Enema c. Ol: Terebinth. ℥ij. et
Eodem fricetur Abdom.

12 o'clock, a. m.—She became still more restless after the Enema, and was obliged to be retained in bed by her husband; she evacuates her fæces in bed (apparently involuntarily); pulse now 120, strong and full, and she labours under a muttering kind of delirium.

E. V. secta fluat sang. ad ℥xij. ℥xij. were drawn; became more composed, and less indistinct in idea and expression; pulse reduced in strength; vomited some greenish liquid, in small quantities, once or twice.

Contr. Pul. ut antea præscript.

Contr. frictio lena Abdom. cum. Ol: Terebinth.

2 o'clock, p. m.—Rather more composed than before the bleeding; complains more rationally of the pain excited by Ol. Terebinth, for which her clothes have been changed; pulse 120, soft; delirium still prevails; flushing of face and beating of carotids and their branches; thirst and heat as before.

Abrad. Capillit: tot. cap. et ei admov. Emplast: Vesicat.

10 o'clock, p. m.—Speaks much more coherently, and feels herself better and freer from pain, but is still restless; skin dry and hot; takes her powders

regularly ; feels, she says, pain in the part to which the blister has been applied ; says she thinks she will sleep to-night ; pulse 142, soft ; strength of body still considerable ; thirst and hunger continue.

Contr. Pulveres ut antea—et lavetur caput aquâ tepidâ et frigidâ, alternis vicibus.

N. B.—The eyes seem a little flushed, and she has said they were painful.

Sunday.—Vomited after three of the powders, taken at the directed intervals, and refused to take any more ; is less under control than before, and refuses all medicines ; eyes heavy and dull ; slept none during the whole night ; respiration quick, and articulates less distinctly than last night ; pulse 120, small and feeble, though she seems to have considerable strength ; complains of the pain of the arm in which she was bled ; no inflammation round the places where the veins were opened ; they have not healed yet ; the pain shoots to the fingers' ends, but not up the arm ; pressure increases the pain ; refused to take an anodyne draught, with antimonial wine, which I had prepared for her this morning ; tongue very dark red, and the white fur on it yesterday has mostly disappeared ; complains of no pain of head or abdomen.

Contr. Lotiones aq. tepid. Capitis—et Habeat si vult Haust.
Antimon : Anodyn : c. Trae. Op. gt. xxx.

N. B.—Made her water freely, but no dejections, and had considerable halucination during the night.

8 o'clock, *p. m.*—Continues to become more feeble and exhausted ; has had mustard cataplasms applied to her feet (by my directions) ; craves very much for whisky ; pulse felt but very indistinctly at wrist, and not to be counted—flutters ; tongue very dark red, and parched ; no white fur upon it ; I allowed her about ξij common whisky, much diluted, which agreed ; has taken the draught at 11 A. M. but has not slept ; countenance much changed, and features more acute ; eyes glazed ; complains still of pain of fore arm, and there is a coloured spot (dark red) on the palmar aspect of the wrist, about two inches in length ; one dejection ; vomited during the day, but not much.

Habeat statim Haust : Anod. c. Trae. Op : gt. xxxv. et Cataplasma Solutione opii confect. brachio admoveatur.

Monday morning, about 2 A. M. she expired, after gradually growing weaker, and without labouring under any painful symptoms.

Wednesday morning, half-past 8.—Obtained dissection ; swollen abdomen ; much escape of gas,

on opening, of a very foetid odour; vascularity of serous surface of intestines; some effusion, not measured, straw-coloured, sunk in water; intestines glued together; stomach's serous surface pale; on margin of liver a coating of yellow lymph. *Mucous texture of stomach* corrugated and undulated; extensive redness of its surface, and many vessels observed on it. Duodenum covered so thickly with vessels, and injected, as to present the appearance of a layer of red currant jelly; some places of considerable redness in the jejunum and in the ilium also, with very numerous ramifications of blood-vessels; the descending portion and sigmoid flexure of colon highly vascular, and the mucous coat of it thickened, soft, and easily lacerated from the subjacent texture. Brain rather more vascular than natural; some slight effusion into ventricles. Uterus larger than usual, and much lymph on its serous surface, with dark patches and white shreds hanging on its interior.

I have detailed the above case, as being the first of the epidemic I had solely under my own care and management—in which I had an opportunity of observing the progress of remedial means; for, the first case I had, was at a considerable distance, (six miles,) that of Mrs. Wither, to whom I was

called in the absence of a Surgeon Accoucheur, (Mr. Agnew, of Sandhead,) who had delivered her, and on his return from a case at a distance, again attended her.

It must be observed, that the milk and lochia in Mrs. Jacobs' case were suppressed—a point of some interest, especially since a very eminent Professor contends, that their persistence is necessary to constitute the disease in question—to distinguish it from Peritonitis. I shall briefly narrate the case of M'Gown, with a view of showing how inefficacious copious general bleeding is, unless at the very onset, and unless it be assisted by topical bleeding. This case, there is every reason to believe, owes its origin to contagion, derived from the above unfortunate person (Jacobs); but in M'Gown, though there be a striking analogy in some of the symptoms, they differ in this—that the milk and lochia were little, if at all, affected; for the mother was able to give suck to her infant a few hours before her death, and the lochia, though not copious, still continued to flow. I am the more anxious to detail the following case, as in some particulars the treatment differed. In Jacobs' case, paralyzed by what I had understood the treatment of an eminent teacher to be, I was afraid to push venæ section to any great length by repetition.

But in M'Gown's case, encouraged by the high testimonials in favour of bleeding, by the fame of the success attendant on the practice in other hands, I bled largely, and without allowing the *benefits* of the previous bleeding to subside, until another was had recourse to. Besides, I had it impressed on me, that my former want of success might be owing to the sparing emission of blood. The following is an abridgement of the case :—

Mrs. M'Gown, aged 35, sanguine temperament; had complained long of difficulty of breathing, or "asthma," but on the whole had been pretty well during her pregnancy; had visited and assisted Mrs. Jacobs whilst she was confined, and during her last illness; was, after a safe delivery, seized on the third day, *post partum*, with pain increased on pressure, tumefaction and tension of the abdomen, much thirst, great febrile anxiety, heat and pungency of surface, head-ache severe; anorexia, nausea, and occasional retching; diarrhœa very distressing; lochia were obstructed, or at least scanty, for a part of the first day of illness, but returned and continued in considerable quantity; milk continued till death; exhibits no carelessness about her infant, as some mention to be characteristic of the disease; cough frequent and severe; respiration quick and short; expectoration glairy,

clear, and viscid, very tough, and expectorated with difficulty; chest's resonancy dull on right side, less so on left; pulse never below 130, small and hard; the modification of the breathing heard by the cylinder was that known by the appellation of *râle crepitant*, somewhat indistinct, and partly the *râle muqueux*, especially on all the left side.

The following is an abstract of her treatment:—
 The disease was ushered in by rigors, for which she took some warm punch, and had, the day before, a dose of castor-oil, with the effect of producing several stools. On Saturday, I bled her to fainting, with relief; in the forenoon, on the return of symptoms, I again took twelve ounces—in all ℥xxxij , on the first day. Applied fomentations and stimulant applications to the abdomen, (Ol. Terebinth,) small doses of tartrate of antimony in solution. On Sunday, I took ℥xx more blood, which brought the pulse down in hardness, but not in frequency; and I had a solution of Tart. Antimon. applied to the abdomen, as a counter-irritant. The Tart. Antimon. in form of solution to be taken internally, was intermitted, as the vomiting or retching was urgent. She also had half a grain of opium every half hour to allay the irritability of her stomach. On Monday, I exhibited an Enema with Oleum Terebinth: she

was then obviously moribund,—passing fæces and urine in bed—delirious, in a slight degree. After the Enema, she expressed much pain and distress; this subsided, however, a few hours before death, which happened at 2 P. M.

The highly injected appearance of the duodenum was very remarkable in this case, and the ulceration or abrasion at the termination of the ilium and in the colon, through a large extent of it, were very remarkable, and led me to devote more intensely my attention to this texture in the following cases I met with. I now was impressed with the necessity of taking the diseased state of the alimentary mucous texture into consideration, in framing the indications of cure. The lung of right side was engorged at the posterior and superior part, highly filled with blood and a bloody serum throughout, and on the left firm adhesions at the superior and posterior part, with much yellowish matter in the bronchice.

Thus had I seen complete depletion, both by purgatives and copious general venæ section—the use of stimulant applications only add to the misery, and apparently aggravate the symptoms; and this not in one or two cases, but in Wither, Adair, Cumming, Jacobs, and M'Gown, had I seen them entirely fail in arresting the disease. I now deemed

any line of treatment I could adopt at least *equally* successful, and conceived myself vindicable in trusting to any measures which were at all likely to avert the fatal issue, or alleviate sufferings so severe. I had now seen the ravages produced by this disease on the mucous membrane of the alimentary canal. I had now been fully convinced how superior local bleeding was over general depletion in another order of diseases in which I have invariably found this tissue in a morbid state. I had, too, been deeply impressed with a conviction that purgative remedies, if at all employed in similar affections, should be exhibited sparingly, and with judgment—that the bowels should be stimulated to action by the gentlest means; and I can safely say, that such are often at once the most expeditious, and the most efficacious. This appears to me most rational, especially in a disease in which one of its worst concomitants is a violent purging—a symptom I hesitate not to refer to an inflamed state of the mucous tissue of the large intestines. It was under these impressions I determined in the next case to rely on local bleeding as the principal stay, and as a specimen of my success, certainly not sanguinely expected, I narrate the case of M'Culloch, to whom I have every reason to believe the disease was carried

through the medium of the *sage femme*, as already related.

Indeed, the great relief which, though only temporary, in the case of a Mrs. Anthony Cummings, followed copious local depletion, inspired me with more hope, and afforded me a little more encouragement.

Friday, September, 1823.— — M'Culloch, aged 38, living in Holm; healthy and vigorous; delivery ordinarily easy; continued to do well till the second day after her labour; pain of abdomen, tension, and tenderness on pressure succeeded rigors, nausea, head-ache, thirst, cough, and dyspnoea, with quick respiration; pulse 120, hard and small; bowels slow the first day, but had been freely opened by castor-oil on the preceding day; had been attended by the same midwife as Mrs. M'Gown; distressing and frightful dreams breaking her sleep.

Admov. Hirud. xxxvj. Abdom.

Foveatur Abdomen et

Injr. q. p. Enema Emolliens.

Absolute abstinence, and a drink composed of mucilage, sugar, and water—*ad libitum*.

Saturday.—36 leeches adhered; bled copiously;

and fomentations applied during the whole night with relief. Two Enemata of warm water were followed by copious stools. I to-day learnt she had severe diarrhœa yesterday. Pain of abdomen diminished, though still tender on pressure; tongue very red at edges; thirst severe; pulse 120, and as yesterday; slept none.

Repetantur Hirudines ad viginti quatuor, necnon fodus et potus ex mucilag. confect.

Sunday.—During night, diarrhœa severe; pain of head agonizing; vomiting urgent; skin “burning.” Pulse to-day 130, feeble and fluttering; countenance anxious; does not complain when abdomen is pressed on. I suspected she had committed some errors in diet; but this was denied.

Repetantur Hirud. et fodus.

Bibat potus ex mucilag. confect.

Monday.—15 leeches only could be procured that would prove serviceable; these, assisted by the fomentations, poured out a large quantity of blood. Head-ache returned; countenance less oppressed; cough easier, and breathing less difficult, and not so quick; tenderness of abdomen

more complained of to-day; had some sleep; no stool.

Repetr. Hirud. ad xx. Foveatur Abdom. Injr. Enema ex aq. tepid c. Trae opii ℥i.

Tuesday.—20 leeches, again bled well, by the aid of the fomentations; had the Enema; slept; some thirst; tenderness of abdomen increased; had some desire to eat, but this was strictly prohibited; head-ache less severe; pulse 130; skin dry and warm.

Repr. Hirud. prout: possint obteneri. Fetus etc.

Wednesday.—One stool after an Enema, and towards morning frequent watery stools, with pain; thirst; tenderness of abdomen as before.

℞. Carbon. Potas. ℥j.

Trae. opii. ℥ij.

Aq. Pur. ℥vj. M. et Cap. ℥i. q. q. q. 3ta hora.

Thursday.—(At 8 P. M. last night,) the first dose of medicine relieved her, and she has slept much since; has regularly taken the above mixture, with great benefit; pulse 120, regular and soft. (*To-day.*)—Continues free from pain, and passed a good night.

Contr. Mist. tantum, ℥i. 6ta q. q. q. hora.

The journal goes on to detail the progress of the case, a slight relapse, and her eventual recovery—and I may add, that she is at this day in perfect health, excepting some hysteric symptoms, with which she has long been affected.

Mary Cousins,* an unmarried woman, some time after a severe delivery,† part of which time she was out in the open air, had a severe attack of symptoms very similar to the last narrated case, if we except the diarrhœa, which was very slight. The difficulty of obtaining leeches led me to use cupping of the abdomen, with the most beneficial effect. The same tenderness of abdomen in her case remained, and opium in the solid form was exhibited, after she had been seven times cupped on the abdomen and inner side of each thigh—a measure no consideration would again make me practice, so great were her sufferings and the difficulty, in such a case, of performing this operation.

I have to express, in conclusion, my earnest wishes that the doctrines, of which the views in the preceding pages are an extension to Puerperal

* Her mother, with whom she resided, lives in the Holm—a newly built part of the village.

† I have omitted to mark the exact day. I think it was during the fourth period of 24 hours after delivery.

Fever, may not fail to attract that attentive consideration their enlightened and experienced founder, M. Broussais, has, to my mind at least, established as their right. The bounds of an Essay of this nature prohibit me from entering more fully into many points connected with the physiology and pathology of the alimentary mucous texture, such as the appearances characteristic of its various states of health and disease,—a consideration of its influences on the other textures of the body,—its numerous sympathies and extensive reciprocal relations with other organs; but this I delay till I shall have more maturely weighed the observations I have already made, and added to my knowledge of the subject, by future opportunity.