

A practical treatise on acute abdominal and pelvic inflammation : containing a comprehensive clinical view of inflammation of the stomach, bowels, peritoneum, uterus, &c.; with a certain and expeditious method of cure / by David Nicholas Bates.

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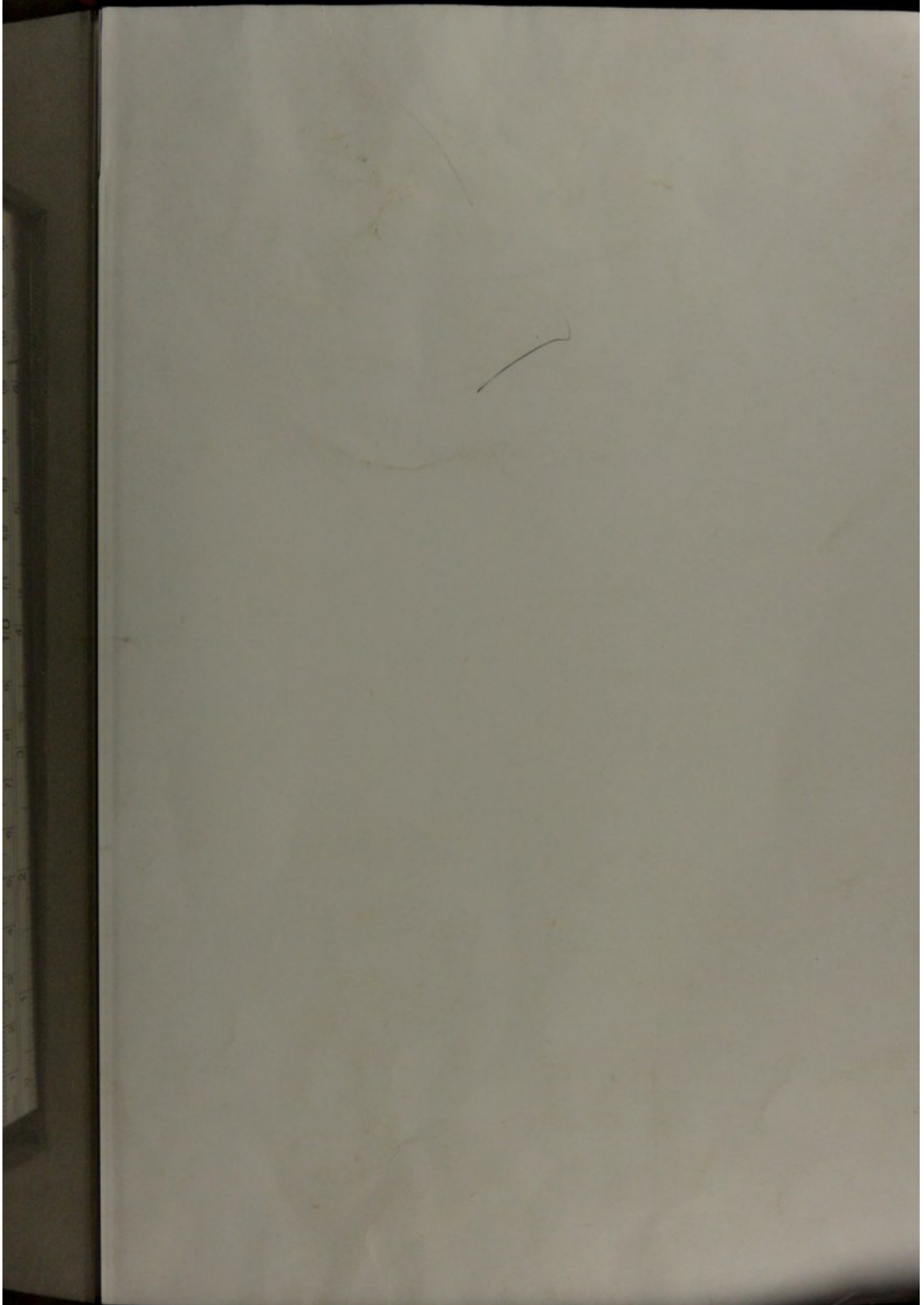
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PRACTICAL
OF
ACUTE ABDOMINAL
INFLAMMATION

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A COMPREHENSIVE
OF
INFLAMMATION OF THE
PERITONEUM.

WITH
A CERTAIN AND
METHOD OF

BY DAVID NICOL
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WINDLEY AND SON, MEDICAL
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PRACTICAL TREATISE

ON

ACUTE ABDOMINAL AND PELVIC
INFLAMMATION;

CONTAINING

A COMPREHENSIVE CLINICAL VIEW

OF

INFLAMMATION OF THE STOMACH, BOWELS,
PERITONEUM, UTERUS, &c.

WITH

A CERTAIN AND EXPEDITIOUS
METHOD OF CURE.

BY DAVID NICHOLAS BATES,

Medical Practitioner.

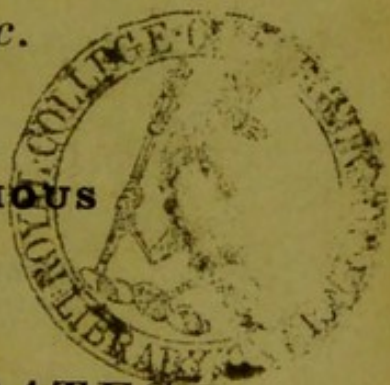
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CANDIDUS IMPERTI; SI NON, HIS UTERE MECUM.

Hor.

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1829.



J. B. Wolfe

1
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PERITONÆUM, &c.



WITH
A CERTAIN AND EXPEDITIOUS

METHOD OF CURING THEM.
BY DAVID NICHOLAS BATES,
M.D. General Practitioner.

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TO

SIR GEORGE DENYS, BART.

INTRODUCTION.

THIS WORK

IS

(*BY PERMISSION*)

MOST RESPECTFULLY INSCRIBED,

WITH GRATEFUL ACKNOWLEDGMENTS

FOR

PROFESSIONAL CONFIDENCE REPOSED

IN

His very obliged

AND OBEDIENT SERVANT,

DAVID NICHOLAS BATES.

Sudbury, Suffolk.

TO

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Sturbridge, Suffolk.

INTRODUCTION.

OF all the diseases which have occupied the attention of the medical world, none have been subjected to more pertinacious enquiry than Acute Inflammation of the Abdominal and Pelvic Viscera; but, in spite of the greatest zeal, talent, and diligence, in those who have undertaken its investigation, their labours have produced no satisfactory results, and this disease has still continued to claim the usual number of its victims.

This failure seems to have proceeded from Pathologists confining their attention, too much, to the change of structure appreciable after

death, in parts which have been the seat of the disease, and not sufficiently considering that those parts have been *living organs*, and could only have had such changes effected by some peculiar *morbid agency*.

However desirable it may be to have a thorough knowledge of the appearances of disease after death, it is still of greater consequence and utility, to observe its phenomena accurately during life, as from these, chiefly, is to be derived a knowledge of the right method of treatment.

As a proof of the necessity of this, is the ill-success which has hitherto attended the practice in this disease, which is founded *only* upon post mortem examinations; and every candid Practitioner will admit, that from the frequently fatal termination of Acute Abdominal and Pelvic Inflammation, it has always

held a prominent place among the “*Opprobria Medicinæ.*”

It is the object of the present work, to remedy this evil, by offering to the Medical Practitioner, an expeditious and certain method of cure, in every variety of this disease, when the following destructive causes do not still continue to operate, viz. Strangulated Hernia, where reduction cannot be effected—when poisons are taken into the stomach in so great quantity, and of such quality, as to destroy its organization; or when a fatal solution of continuity has been effected in any of the viscera, by mechanical means; these, of course, are out of the reach of art.

Although it is not here professed, to treat upon Chronic Inflammation, yet, as its immediate connexion with Acute Inflammation is obvious, it is hoped that the observations made

upon it will, upon enquiry, be found to be correct.

It has been thought necessary to make a new classification of Acute Inflammation of the Abdominal and Pelvic Viscera, in order to afford a more comprehensive view of its different varieties as they appear in *actual practice*; this will be found to be in accordance with the simplicity, and uniformity, of the treatment.

The practice, here recommended, is illustrated by cases *selected* from considerably more than a *hundred*, and are introduced, with suitable observations, to show how this disease may be successfully encountered under every variety of form and circumstance: it may, also, be necessary to add, that although this disease had raged almost epidemically in this part of the country, in the autumn of 1824, and has been more than usually prevalent up

to the present time, yet, *not a single instance of failure has occurred, under my care, since it has been treated in this manner.*

The observations, that appear in the course of this work, being made at the bed-side of patients, will be immediately identified by the experienced Practitioner, who will, also, be satisfied, by a single trial of the treatment proposed, with how much facility the most violent attack of this disease may be subdued.

As it is almost impossible to make any progress in the knowledge of the cure of a morbid affection, without reflecting upon the "*modus operandi*" of the *diseased action*, by which it is produced and supported—the *structures* that are most susceptible to this diseased action—and those particular *parts* which favour its extension, together with the *means* that are successfully used for its

removal; so, in the present instance, a *theory* of this disease is presented to the consideration of the Practitioner, founded upon *data* drawn from the above sources, by which, and the known laws of the animal economy, all the phenomena which it exhibits seem to admit of an easy explanation.

The importance of the subject treated upon, and the natural desire of lessening the evils incident to suffering humanity, will sufficiently plead my apology for appearing before the public; and it is accompanied with the confident hope, that many patients, whose lives may be valuable to their families and to the community, will, by the means recommended in this work, be preserved from a premature and painful death.

ON
ACUTE INFLAMMATION
OF THE
ABDOMINAL AND PELVIC
VISCERA.

THE Viscera of the Abdomen and Pelvis, are subject to two kinds of Inflammation,—the **ACUTE** and the **CHRONIC**.

There is great obscurity, in the symptoms of the latter, so that it frequently cannot be easily distinguished, during life, from some diseases of a different nature;* but the lesions occasioned by it, have been fully appreciated after death, and are found to consist of ulceration; preternatural thickness or thinness; softness or hardness; excrescence or abscess;† and either a

* Vide Cullen's First Lines, vol. I. chap. 10, ccccxiv.

† Vide Cooke's Morgagni, vol. II. chap. 3.

paucity or a morbid increase of the secretions peculiar to the parts occupied by it, but which are generally in a depraved state.

CHRONIC INFLAMMATION, which is never an original affection, is more frequently seated in the *substance* of the solid viscera, viz. the Liver, Spleen, Pancreas, Kidneys, and Uterus; it may sometimes be found in the Peritoneum, or in the Mucous Membrane of the Stomach and Intestines; but is always the consequence of Acute Inflammation.

The character of Chronic Inflammation, in whatever part residing, is to produce in it a lingering disorder, in which the whole system participates, more or less, in proportion to the importance of the viscus occupied by it, and the extent of the disease. Sometimes the apparent disturbance it occasions is so slight, that this disease is not suspected to exist; until death happening from that, or some other cause, its presence is made manifest by dissection.

ACUTE INFLAMMATION, which is more par-

ticularly the subject of the present treatise, differs from the Chronic, in the violent pain that invariably accompanies it, in the structure of the parts, which is favourable to its action, and in the activity with which it arrives at its termination.

The MUCOUS MEMBRANE of the Stomach and Intestines, Uterus, Bladder, and Kidneys, with the PERITONEUM covering these, and the rest of the Abdominal and Pelvic Viscera, are more particularly the seat of Acute Inflammation.

Acute Inflammation, seldom in this country, attacks the *substance* of the Liver,* Spleen, Pancreas, or Kidneys, at least, to any great extent, as there is not sufficient sensibility in these parts to support it; it seems to require all the susceptibility of the delicate mucous and serous membranes, to enable this disease to develop its peculiar characteristics.

Systematic writers have been in the habit

* Vide Dr. Baillie on Morbid Anatomy, p. 139.

of considering the different varieties of acute abdominal and pelvic inflammation, as so many distinct diseases; for each of which, a separate and supposed appropriate plan of treatment has been accordingly laid down; thus we have Gastritis, Enteritis, and Peritonitis, given as distinct diseases.* The inapplicability of this arrangement in practice must be evident, when we consider the situation of the parts thus unnaturally separated in the classification; as Gastritis may exist with Enteritis, and Peritonitis with either or both.

Acute inflammation, of the mucous membrane of the stomach and intestines, almost always interests the neighbouring Peritoneum, and in either case, the symptoms are so alike, that it would be impossible, neither is it necessary, to distinguish them.

When the inner membrane of the uterus is attacked with acute inflammation, it almost always extends to its peritoneal covering, and

* Vide Dr. Baillie on Morbid Anatomy, p. 98.

thence, to the same structure throughout the abdomen, if not speedily arrested.

As similarity of structure, generally implies, throughout the system, a correspondence in disease; there can be no good reason, why acute inflammation of the peritoneum, covering the liver, pancreas, spleen, uterus, and bladder, should require a different mode of treatment to that adopted in peritoneal cases in any other part; more especially, as in these viscera, it is only a continuation of the same structure; and from the peculiar connexion between the Abdominal and Pelvic viscera, they may be considered to belong to the same cavity.

The classification of acute abdominal and pelvic inflammation, now in use, is likely to lead to much bad practice; by drawing off the attention of the young practitioner, from the similarity of structure and function, in the different parts of the peritoneum that may be attacked, and directing him to consider the viscera which it envelopes, as the seat of the

disease; also in acute inflammation of the stomach and intestinal canal, when the disorder originates in its mucous membrane, or peritoneal covering, and extends, as is frequently the case, to the adjoining peritoneum covering some of the other viscera; the classification alluded to, is apt to create confusion in the mind of the practitioner, and cause him to feel doubt as to the treatment, when the utmost decision is required.

ACUTE INFLAMMATION of the **ABDOMINAL** and **PELVIC VISCERA**, is here therefore considered but **ONE DISEASE**; having in some cases, a *slight variety of symptoms*, from the *locality of the affection*; but maintaining the same *leading features* of its character, wherever situated; viz. *acute pain* and *exquisite tenderness*, in the part affected.

SYMPTOMS and DIAGNOSIS
of ACUTE INFLAMMATION.

In the STOMACH and INTESTINES.

It generally commences with a rigor, followed by pain in the seat of the affection, which, at first remitting, quickly becomes more severe and continued; until in its acmè, at which it soon arrives, it is most excruciating. The pain has frequent exacerbations, and the frequency of its return, always corresponds with the severity of the disease; these exacerbations are sometimes so intolerable, that they force the patient to utter loud cries. The pain is greatly increased by pressure; the tenderness in the part being often so exquisite, that the patient cannot bear the weight of the bed-clothes; there is also a sense of heat in the part, more particularly when the stomach is the seat of the affection, with great thirst; swelling of the abdomen generally takes place, shortly

after the commencement of the attack, and continues through the whole course of the disease. Vomiting is also a common symptom, depending, in some measure, upon the part of the intestinal canal in which the disease has its seat; if in the stomach, duodenum, jejunum, or ileum, more particularly in the first, this symptom is an invariable attendant; but when the colon is alone affected, there is occasionally no vomiting, though frequently it is equally violent, with that which accompanies the attacks of either of the other parts; the matter vomited is of a watery nature, mostly of a green colour, mixed with bile; yet, sometimes, even in fatal cases, it presents no unnatural appearance; but for the most part, before dissolution, it acquires a dark coffee-ground colour, and occasionally, strongly resembles feces. When this disease resides in the stomach and small intestines, it is attended with obstinate costiveness, but when in the colon, with a painful and wasting diarrhoea; in

the latter case, the colour of the alvine evacuations is generally green, or black, and sometimes bloody. There is from the beginning, great prostration of strength, more particularly when the attack is in the stomach; also considerable restlessness, which increases in proportion to the severity of the pain, and diminishes, or completely subsides, when the pain and sickness are mitigated or removed. The state of the pulse will not be found a very correct criterion, by which to judge of the progress of the affection,* except, when it is approaching to a fatal termination; the pain having, perhaps, suddenly subsided, the patient thinks himself better; but the fluttering pulse informs the practitioner, that dissolution is at hand; the pulse, also, is greatly influenced by vomiting; for in most cases, when that symptom is present, and frequent, it will be found quick and small; but in the absence of vomiting its state is very uncertain, being occasionally full and strong, quick and small, and sometimes

* Vide Dr. Pemberton on Abdominal Viscera, note to p. 23.

quite undisturbed. Much stress has been laid, by writers, on the appearance of the tongue; but this will be found still more variable and uncertain than that of the pulse; perhaps towards the close of cases, that are likely to end fatally, it may assume a dry brown colour; but it has occurred to me, to observe the tongue, under these circumstances, remain covered with a white fur to the last. The countenance retains, throughout the whole course of the disease, a pallid hue; and is expressive, in severe cases, of extreme anxiety. The urine is generally high-coloured, and retention of urine is very common in severe cases, more especially in females. This disease is easily distinguished from colic or cholera morbus; the pain in them being relieved by pressure.

IN THE PERITONEAL COVERING OF THE LIVER.

There are some peculiar symptoms belonging to the disease, when situated in this part, arising principally, from its vicinity to the

diaphragm, and connexion with the phrenic nerve; thus in addition to severe pain, having frequent exacerbations, if the disease take place on the convex surface of the liver, the pain will be felt anteriorly or to the right side; but if on the concave surface, the pain will be referred to the back; the pain, also, for the most part, follows the course of the phrenic nerve, and lancinates to the top of the right shoulder; there is, also, more or less, of cough, and difficulty of breathing. The patient generally lies easiest on the right side; apparently, because the motion of the ribs being thus confined, in some measure prevents the cough, which is generally dry and troublesome, from occasioning so much friction on the inflamed surface, and thereby increasing the pain. There is great tenderness, upon pressure, under the ribs, which, if applied with any force, obliges the patient to hold his breath, and brings on an exacerbation of pain, and an increase of the cough. In violent cases, this disease is some-

times accompanied with vomiting, perhaps from the inflammation extending to the stomach. Jaundice will sometimes supervene, from the gall ducts being interested in the affection. The urine presents the same appearances which are usual in inflammatory affections, except jaundice be present, when it will exhibit the yellow tinge peculiar to that disorder; the tongue, in this latter case, may put on a yellow fur, otherwise its appearance, like the state of the pulse, is very variable, and, therefore, not to be depended upon. There is great thirst, anxiety, and restlessness; but no tossings, for the reasons above mentioned. It is to be distinguished from Pneumonia, which it strongly resembles, by the pain being increased when pressure is applied under the ribs of the right side; the other diagnostic symptoms are uncertain. Acute inflammation of the peritoneum, covering the liver, is often combined with the same disease in the same structure, covering some part of the alimentary canal,

forming together a very complex set of symptoms, highly perplexing to practitioners, unless they be recognised, as belonging to the same disease, and curable by the same means.

IN THE PERITONEAL COVERING OF THE Spleen.

This will be detected by the violent pain, peculiar to peritoneal inflammation, felt in the left side, and increased, by pressure, upon or under the false ribs; if the disease be seated in the concave surface of the spleen, it will probably extend to the stomach, when vomiting will ensue; if the upper surface of this viscus be affected, some difficulty of breathing may, perhaps, be experienced from the proximity of the diaphragm. It is seldom, that so small a surface of Peritoneum remains long alone the seat of acute inflammation, when attacked primarily; the disease extending, in its usual manner, to the adjoining viscera; or, more frequently, the spleen is affected secondarily,

being involved in the disturbances of the surrounding surfaces.*

In the PERITONEAL COVERING of the Pancreas.

This is rarely the original seat of acute inflammation;† but is sometimes involved in that disease, when it occupies the adjacent surfaces. From the peculiar situation of this viscus, its morbid affections are not easily distinguishable from those of the stomach.

In the PERITONEUM belonging to the Kidneys.

This structure, being separated from these glands, by a large quantity of fat, and cellular substance, an attack of this nature does not immediately disturb their functions, unless a larger extent of the surrounding surface be

* Vide Dr. Baillie on Morbid Anatomy, p. 167.

† Vide Dr. Baillie on Morbid Anatomy, p. 175.

concerned in the affection. It is to be distinguished from Lumbago, by pressure being applied in the space between the lower ribs and the ileum; the affection, under consideration, being increased by it, the latter rather relieved. The Pelvis of the Kidney is not often the seat of acute inflammation, but it may be produced by the irritation of calculus; it is then accompanied with violent pain in the region of the kidney, shooting down the ureter; and, perhaps, the disease extends to the bladder, causing Dysuria and Micturition; the urine will be mostly bloody, because the calculus, which has produced so much irritation, must have a rough exterior, with which, it may be supposed, the pelvis of the kidney is abraded; there is, also, a numbness of the thigh, on the affected side.

IN the OMENTUM, MESENTERY, and PARIETAL PERITONEUM.

These will present the *leading symptoms* of acute abdominal inflammation,—*acute pain*

and tenderness, and will be accompanied with *accidental* symptoms, according to the severity of the disease, and the part occupied by it.

IN THE UTERUS.

This disease scarcely ever occurs, except shortly after parturition, generally about the second or third day; it is preceded by a rigor, followed by violent pain shooting from the back forwards to the lower and forepart of the abdomen, and thence down to the thighs; this pain, at first, recurs at short intervals, but gradually increases in frequency, until it becomes continued, with frequent exacerbations. The uterus is felt like a ball over the pubis, and is so extremely tender, that to lessen the pressure of the abdominal muscles, the patient lies upon her back, with the knees drawn up towards the abdomen. From the beginning, the milk is diminished in quantity, and if the attack be very severe, or long continued, is entirely lost; the lochia are, also, suppressed; the patient is troubled either with retention

of urine or strangury; there is considerable Pyrexia, thirst, restlessness, tossing, and expression of anxiety in the countenance; the pulse is generally full and hard. If these symptoms be not relieved in a short time; the disease, which had originated in the inner membrane of this organ, extends up the large veins in the fundus, which are now dilated, and through the Fallopian tubes, to the ovaria and surrounding peritoneum; and if not arrested, may occupy the peritoneal surface of every viscus, in succession; when there will be superadded to the original affection, the symptoms peculiar to the locality of the viscera attacked; and a great enlargement of the abdomen, with vomiting; sometimes this latter symptom is present, when the disease is entirely confined within the uterus.

In the BLADDER.

This is generally preceded by a rigor, and is attended with violent shooting pain and heat in the pelvis; the pain is much increased by

pressure above the pubis downwards, and upon the perinæum upwards; there is frequent desire to void the urine, which is effected with difficulty, and considerable pain; the quantity passed, at one time, is very small; occasionally there is complete retention, and more or less of irritation in the sphincter ani, accompanied with painful tenesmus; sometimes the disease extends to the cavity of the abdomen; in which case it exhibits the symptoms of acute inflammation peculiar to the parts so interested.

REMOTE CAUSES

of ACUTE INFLAMMATION.

In the STOMACH and INTESTINES.

This disease may be induced by irritating substances, either mechanical or chemical, applied to the mucous membrane of the stomach and intestines; large quantities of spirituous liquors, taken in a raw state; or cold water, taken in considerable quantities, when the body

is preternaturally heated, and in a state of profuse perspiration. It may proceed, also, from external violence; or from cold long continued, more particularly when combined with moisture, applied to the surface of the body; or it may be communicated to these parts, from adjacent viscera affected with this disease. It sometimes occurs in the course of Typhus Fever, and the same applies to the rest of the abdominal viscera, (as well as to those which occupy other cavities,) in consequence of the general disturbance of organic functions peculiar to that disease.

It is generally considered, that costiveness is one of the most common causes of this affection; but post mortem examinations, in cases in which this kind of obstruction was suspected, and not a particle of feces discovered, together with my own experience in the *treatment* of this disease, fully convince me, that this opinion is founded in error; and

is one that has, unfortunately, been productive of much injurious practice.

In the PERITONEUM investing the Liver.

In addition to the causes above-mentioned, certain passions of the mind are mentioned by some authors;* excessive summer heat, or violent exercise.

In the PERITONEUM lining the Abdomen, and investing the rest of the abdominal viscera, or forming their structure, as in the omentum and mesentery, the same causes, as those above-mentioned, may operate in producing this disease.

In the MEMBRANE lining the Pelvis of the Kidney.

This affection, the Nephritis Idiopathica of authors, is very seldom met with in practice: when acute inflammation does occupy this

* Vide Cullen's First Lines, vol. I. chap. 10, ccccxvi.

part, it is generally produced by the irritation of calculus lodged in its cavity,* or in the tubuli uriniferi; it may, also, extend from the bladder and ureters.†

In the UTERUS.

This disease never occurs, except in a short time after delivery; and may proceed from a portion of the placenta being retained; instrumental delivery; indulgence in too stimulating a diet; or exposure to cold.

In the BLADDER.

This may be the consequence of calculus retained in its cavity; of long-continued retention of urine; or mechanical injury. This disease more particularly occurs from the extension of the morbid action from some neighbouring part; the urethra in Gonorrhœa; or the ureters in acute inflammation of the kidneys.

* Vide Dr. Baillie on Morbid Anatomy, p. 180.

† Vide Shaw's Manual of Anatomy, p. 89.

TERMINATION
of ACUTE ABDOMINAL and PELVIC
INFLAMMATION.

This disease, wherever situated, may terminate in RESOLUTION, SUPPURATION, CHRONIC INFLAMMATION, ULCERATION, GANGRENE, and DEATH. From the surface of the peritoneum alone can *adhesion* take place, so frequently discovered between adjoining viscera; and that *effusion* into the *cavity* of the abdomen, so common in this affection; yet a process, very similar to the latter, is observable in the increased quantity of fluid ejected, by vomiting in this disease generally, or passed per anum, in acute inflammation of the colon; in both of which cases, it must be secreted, or effused, from the mucous membrane.

IN RESOLUTION.

This is known to take place, when the pain, tenderness, and vomiting, if any, are removed;

and the patient remains in a state of convalescence. When the uterus has been the seat of the disorder, and this has been speedily removed, there is generally a return of the milk and lochia.

IN SUPPURATION.

This is ushered in by severe rigors, after a considerable remission of pain; the tenderness remains undiminished, while a sense of weight and fulness is experienced in the part.

The abscess may be formed in the cellular membrane, which attaches the mucous membrane, of the alimentary canal, to the muscular coat; and on the other side, in the same structure, by which the peritoneum, investing the stomach and alimentary canal, is connected with the middle coat; as, also, in every other part of the cellular membrane, by which the peritoneum is attached to the different viscera and surfaces of the abdomen.

When abscess forms between the coats of

the alimentary canal, it either breaks into that channel, and is evacuated per anum;* or the peritoneum, which covers it, throws out coagulable lymph, and forms an adhesion with the peritoneal surface opposite to it, lining the parietes of the abdomen, when the matter is discharged outwardly; but if this process do not take place, it will empty itself into the cavity of the abdomen, and by its irritation, produce extensive inflammation, which can end only in death.

Abscess, formed in the liver, is occasionally discharged, by the process of adhesion, into the stomach, lungs, and externally at the side.†

* A case of this kind came under my own observation, in 1814. The subject of it was an agricultural labourer, who discharged pus, in large quantities, for a considerable time; but he at length got well.

† A case, answering to this latter description, came under my care, in 1816. The subject of it was a girl, about 17 years old, who died. Also vide Dr. Pemberton on Abdominal Viscera, p. 37.

When calculus is impacted in the tubuli uriniferi, or in the pelvis of the kidney, the irritation it produces is so great, that the substance of that organ is sometimes nearly destroyed by suppuration.*

Suppuration is a very common consequence of acute inflammation in the uterus, and it generally proves fatal; the great veins in the fundus, the Fallopian tubes, ovaria, and body of the uterus, being found full of pus.†

In the bladder, suppuration sometimes, but very rarely, occurs, and then mostly proceeds from violence done to this viscus, in operations. If the matter escape into the abdominal or pelvic cavity, it will, with the urine, occasion destructive inflammation.

IN CHRONIC INFLAMMATION.

This termination may be considered as the relict of acute inflammation, when no change

* Vide Dr. Baillie on Morbid Anatomy, p. 180.

† Vide Dr. Clarke's Essays, p. 69 and 70.

† Vide Dr. Baillie on Morbid Anatomy, p. 80.

of structure has taken place in the part occupied by it; but the vessels interested in the disease, being left in a preternaturally turgid state, and unable to recover their former diameters, constitute, in this morbid condition, a disease, which, under the title of *Chronic Inflammation*, assumes a primary character, effecting, in an insidious manner, all those changes of structure and secretion, which have been before described as proceeding from it.*

Effusion cannot be strictly called a *termination* of acute abdominal or pelvic inflammation, as the presence of it does not ameliorate the disease, nor check its progress; on the contrary, it is rather an attendant on the worst cases of acute peritoneal inflammation, in whatever part it resides. The fluid effused is generally of a light brown colour, resembling serum, with small shreds of coagulable lymph floating in it; sometimes this is mixed with pus, which gives it a turbid appearance.†

* Vide p. 1 and 2.

† Vide Dr. Baillie on Morbid Anatomy, p. 80.

Adhesion cannot be properly called a *termination*, but a *consequence* of acute inflammation; and takes place, by the inflamed peritoneal surfaces throwing out coagulable lymph, by which adjoining surfaces are glued together. This intervening substance soon becomes organized, and assumes a membranous appearance, which admits of great extension; so that the peristaltic action of the intestines is but little, if at all, impeded by this preternatural structure. Sometimes a white, thick, soft, granulated mass of matter attaches itself to the peritoneum, and lies between the convolutions of the intestines; the omentum is described as having been changed into the appearance of a cake, by this substance.*

IN ULCERATION.

This is seldom met with in the peritoneum, as an *immediate* consequence of acute inflam-

* Vide Dr. Baillie on Morbid Anatomy, p. 82.

mation; it is sometimes found in the mucous membrane of the stomach and small intestines, but much more frequently in the colon, the mucous membrane of which is sometimes entirely destroyed by the ulcerative process.*

IN GANGRENE.

This has been, and is still, very generally considered the cause of the quickly-fatal termination, so common in acute abdominal and pelvic inflammation: this notion is, however, founded in error; as post mortem examinations prove that it very rarely occurs,† perhaps never, except as the consequence of Strangulated Hernia. It seems to me almost impossible, that inflammation, in parts so situated, could arrive at so great a degree of intensity, as to produce such an effect, without being attended with so much constitutional irritation,

* Vide Dr. Baillie on Morbid Anatomy, p. 99 and 100.

† Vide Dr. Baillie on Morbid Anatomy, p. 99 and 101.

and consequent exhaustion, as to occasion death, previous to its consummation.

IN DEATH.

This, next to resolution, is one of the most common terminations of acute abdominal and pelvic inflammation.

The very short period of time in which it frequently takes place, after the first attack, leads us to think, that the above-enumerated terminations do not sufficiently explain how this event is so suddenly produced; for cases are recorded of Gangrene having taken place in the intestines, in Strangulated Hernia, in which the gangrenous portion having been removed, during the operation for its relief, and the end of the intestine attached to the external wound, so as to form an artificial anus, the patients have done well; so that Gangrene, in the intestinal tube, is not necessarily followed by death.

It appears to me, from the consideration of

these circumstances, that death, in this disease, is not *immediately* occasioned by any appreciable organic lesion; as this has been found, after death, to have existed, in one or more of the viscera, without producing an effect upon the general system, equal to its extent, and even without being suspected.*

There must, however, exist in the system, more or less of *constitutional irritation*, in every departure from healthy action, whatever may be the degree, or nature, of such morbid action; whether it be a disease, attended with the most acute and agonizing pain, or one that occasions the most trifling degree of uneasiness.

Constitutional Irritation is known to exist, by the disturbance, more or less, of the vital, natural, and animal functions; and, more particularly, in that set of organs, in which the disease resides. In this unnatural state of the system, there is always a corresponding *general debility*, proportionate to the importance of the

* Vide Cullen's First Lines, vol. I. p. 260, cccxcii.

part attacked, its sensibility, the continuance of the morbid action, and the degree of *constitutional irritation*, consequently existing.

No morbid actions are attended with such remarkable constitutional irritation, as those which are productive of acute and continued *pain*; and none, therefore, more speedily bring the system into a state of extreme exhaustion. Even when natural actions are prolonged beyond the limits imposed by the laws of the animal economy, more particularly when accompanied with *pain*, *fatal exhaustion is the consequence*: for instance, the parturient female, who dies undelivered, when neither hæmorrhage, nor other untoward circumstance, has supervened, falls a victim to fatal exhaustion, *indirectly* induced by *pain*.

History abounds with instances of criminals being *tortured* to death; their executioners ingeniously avoiding to injure vital parts; but Providence has wisely and mercifully set a limit to human sufferings, by this law of the

animal economy,—that *constitutional irritation*, with its consequence *debility*, shall await on *pain*, in proportion to its *intensity*; so that the more *acute* and intolerable it is, the more speedily does it hand down the sufferer to the grave.

Thus *pain* becomes an *indirect cause* of fatal *exhaustion*.

The subtraction of a large quantity of blood from the system, has the effect of producing general and *direct debility*, and, if persevered in, to a *sufficient* extent, *fatal exhaustion* is necessarily the consequence; the preternatural increase of any other secretion, or excretion, by whatever means produced, induces *direct debility*, and ends in dissolution, sooner or later, in proportion to the morbid increase of quantity, and the comparative strength of the patient.

Thus there are *two causes of fatal exhaustion*, one *indirect*, viz. PAIN,* and the other

* Vide Cullen's First Lines, vol. I. p. 259, cccxcviii.

direct, viz. DEPLETION. This will explain how death takes place so speedily in violent cases of acute abdominal and pelvic inflammation; the danger of which, is found to be in proportion to the amount of *pain*,* and the degree in which the *direct causes* of exhaustion co-operate with it.

TREATMENT.

This may be successfully conducted in two ways; the *first*, by enema; the *second*, by medicines taken by the mouth; or the former may be brought to the aid of the latter, should it not prove quickly effectual in removing the disease; or the *two Plans of Treatment* may be conjoined; although when the former is used, such a combination will not be necessary, as its success is certain.

* Vide Dr. Pemberton on Abdominal Viscera, p. 4 and 5.

THE FIRST PLAN.

The **HORIZONTAL POSTURE** must be strictly enjoined to the patient, and persisted in, while any symptoms of the disease remain; not the slightest departure from it must be permitted, even for the purposes of natural relief; it is, therefore, necessary for the patient to be provided with a bed-pan. The practitioner must always bear in mind, that this position is the "*sine quâ non*," without which, the remedies will be counteracted, and the cure of the complaint be frustrated, or protracted.

The patient should lie on a soft bed, in order to encourage perspiration, as this is very favourable to the resolution of the disease.

BLEEDING at the arm will be generally proper, when first called to a patient labouring under this disease, provided the strength will admit of it; but if there be great exhaustion, from the long continuance of the affection, from previous depletion, excessive vomiting, or purging, however the latter may be occa-

sioned, the practitioner had then better refrain from blood-letting, and have immediate recourse to the opiate enema, which will next come under consideration. The quantity of blood taken, should not exceed a pint; and if the plan here generally recommended be adopted, it will not require a repetition. The buffy appearance of the blood, so often dwelt upon by authors, and considered by many medical men, as the grand test, by which the danger of the attack can be estimated, ought not to influence the practitioner in the treatment of this disease: he must attend to the *violence of the pain*, together with the *vomiting*, or *purging*, if present, by which alone he will be enabled to form any thing like a just and certain prognostic; for it has often occurred to me, to see the blood exhibit no buffiness, when the symptoms left no doubt of the existence of most acute inflammation.

The OPIATE ENEMA should be used immediately after the bleeding, or without it, if that

evacuation be judged either unnecessary, or improper; the following is the form and quantity found most convenient and efficacious:

℞. Tr. Opii ℥j.—℥ij.*

Decoct. Amyli Calefact ℥xij.

Mf. Enema quàm primum injiciendum.

The general effect of this in quelling the *pain*, *sickness*, and *diarrhœa*, if the latter be present, is almost instantaneous; the patient who, previous to its exhibition, had been writhing under the agonies of acute inflammation in the stomach and intestines, or peritoneum generally, with continual retching and vomiting, and, perhaps, diarrhœa, at

* This is the quantity for an adult; not less than Tr. Opii ℥j. should be used for the most delicate person of either sex: ℥i℞. or ℥ij. may be employed when the patient is of a very robust constitution, or the symptoms very violent. The lesser quantity has generally been found sufficient.

once becomes calm and composed, and complains only of great tenderness in the abdomen, more particularly in that part which was the seat of the disorder. If there be no return of pain in twelve hours, another enema, containing not less than a dram of tinctura opii, should be exhibited, to prevent a return; but if there be a renewal of the primary symptoms, at whatever period, the quantity first used may be again repeated. The tenderness of the body will be found to continue for a day or two, after the subsidence of the pain, but will gradually diminish, until it finally ceases. It will be necessary to confine the patient to the horizontal position, for not less than two days, after all the symptoms have disappeared.

The DIET should consist of cold water, or toast-water, well-strained barley-water, or plain thin gruel, both of which latter are to be taken cold, and in small quantities; as it has been observed, that any warm liquid increases the

again, the delicacy of the fair sex, and the

pain and sickness, as well as the tenderness of the part affected; tea and coffee have the like effect: fruits of every kind should be abstained from, notwithstanding the authority by which they are recommended,* as they are apt to occasion griping and flatus; for the same reason, acescents of every kind are exceedingly objectionable. No solid food should be allowed, until the abdomen is free from tenderness; and the return to it must be very gradual, beginning with arrow-root, tapioca, chicken-broth, with toasted bread, or weak mutton-broth, and from these to the lighter sorts of meat, until the patient resumes his usual diet.

LAXATIVE LAVEMENTS should be exhibited, to relieve the bowels when confined, but not before the pain and sickness have been removed, and the tenderness of the abdomen somewhat abated.

* Vide Cullen's First Lines, vol. I. p. 267, ccccx.

The following form will be found to answer exceedingly well.

℞. Vini Aloes ℥iij.

Magnesiæ Sulphatis ℥j.—℥ij.

Olei Olivæ ℥j.

Aquæ Calidæ ℥xij.

Mf. Enema quartâ quâque horâ injiciendum, donec alvus respondeat.

It may sometimes happen, either from the constipation being obstinate, or some mismanagement in the exhibition of the enema, that the bowels may not be satisfactorily relieved; in this case, it will be necessary to adopt some one of the laxatives mentioned in the second plan, but under the restrictions there given.

There are some obstacles standing in the way of the general adoption of this practice; in the first instance, the dislike entertained by most patients, in this country, to the use of the enema, before other means are tried; again, the delicacy of the fair sex, and the

difficulty, in some situations, of procuring persons able to introduce them properly. It is, therefore, fortunate, that another mode of practice can be supplied, almost equally efficient, though certainly not so speedy in its effects; and to which the one now being described may be brought in aid, if from inattention to directions, on the part of the patient, or his attendants, or from the well-meant, but often injurious, officiousness of friends, the patient is brought into a state of danger; in this case, the practitioner must exert his influence to the utmost, to overcome the prejudices of the scrupulous, and by the exhibition of the opiate enema, place the patient in a state of safety.

It is necessary here to add, that my experience, of the efficacy of the opiate enema, does not extend to acute inflammation of the uterus, not having had a single case that required it; the treatment of that affection has been generally trusted to the remedies proposed in the next plan, which have always succeeded in

removing it, with the greatest facility; but there is no doubt, in my mind, from the known powers of the remedy, that it would be equally effectual in this, as in any other variety of the disease.

It will be found beneficial, in aid of this treatment, to apply *bottles of warm water* to the feet, which are always grateful to the patient; and to direct the abdomen to be fomented with *flannel wrung out of warm water*, provided the tenderness is not so great as to prevent it; a *liniment*, composed of tinctura opii and linimentum saponis, may be afterwards warmed, and gently rubbed over the abdomen.

Leeches will be found of essential service, applied to the part where the tenderness chiefly resides; and should always be employed when this is very great, more particularly to patients of a scrofulous habit, as in them this symptom is particularly tenacious.

Blisters are too irritating to be applied, while the patient is suffering acute pain; but when the tenderness does not readily subside, after the more active symptoms are removed, they may be employed with advantage.

THE SECOND PLAN.

What has been said of BLOOD-LETTING, in the treatment just described, applies equally well in this.

Instead of using the opiate enema, the following bolus is to be given:

℞. Pulv. Opii.

— Antimonialis.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus quàmprimum sumendus, in horâ repetendus, et binis horis continuandus, donec dolor cessat.

If any one of the boluses be rejected by vomiting, another should be given immediately: as it is of consequence to ascertain whe-

ther the boluses be retained, the ejecta should be received into a white bason.

By pursuing this plan steadily, it will be found, that the patient will gradually lose the pain and sickness, and, from the fifth bolus to the tenth, become tolerably easy; sometimes the third or fourth bolus will have the desired effect; but if, from any untoward circumstance, the tenth or twelfth bolus do not give decided relief, recourse must be had to the use of the opiate enema, as early as possible, as the longer the pain continues, the more likely is irreparable mischief to ensue.

The combination of pulvis opii, with pulvis antimonialis, has an effect very different from pulvis opii alone; and is much superior, in this disease, to the combination of that drug with hydrargyri submurias, more particularly as the latter is apt to disagree with a scrofulous constitution, and to produce unpleasant symptoms in all; in addition to which, it is not so efficacious in relieving the pain and sickness, and in encouraging a diaphoresis.

The general effect of the remedy, here recommended, is to relieve the pain and sickness, and to produce in the patient a perspiration, more or less profuse; though, occasionally, this latter has been found not to have occurred. If a larger quantity of pulvis antimonialis be added, the bolus loses its power of checking the sickness, and will be constantly rejected.

A morbid anxiety generally prevails with the patient, and sometimes with the practitioner, to procure early and large evacuations from the bowels; for which purpose the most irritating purgatives are sometimes employed, at the time that the pain and vomiting are excessive; when even the mildest must do harm, by adding to the pre-existing irritation; the common consequence is, that they are rejected, with great aggravation of the sufferings of the patient; or if they happen to succeed in evacuating the bowels, no relief from pain and vomiting is thereby afforded; on the contrary, the symptoms are always exasperated.

The ill effects, of the improper use of purgatives, are more eminently conspicuous, when the patient is labouring under diarrhœa, in addition to the other symptoms, in acute inflammation of the colon: the colour of the alvine evacuations, in that case, being mostly dark green, or black, the practitioner is apt to consider the dark-coloured excretion as the "*irritamentum malorum*," and evinces his hostility to it, by the continued employment of purgatives; notwithstanding which, the evacuations obstinately remain unaltered to the last, and the patient is reduced, by these unavailing means, to a state of fatal exhaustion.

Instead of giving purgatives in such a case, the opiate enema, described in the other plan, should be employed, to allay the preternatural action, by which this change, in the secretions of the intestinal canal, has been effected, and to check the debilitating evacuations; this part being thus restored to the performance of its

healthy functions, the feces will gradually re-assume their usual colour and consistence.

It may be remarked, that so little is to be ascertained, in the different varieties of this disease, from the colour of the secretions and excretions, that the following motto, "*Nimum ne crede colori,*" will apply equally well to them all.

In accordance with the treatment recommended in the former plan, the circumstance of the bowels being confined, must not precipitate the use of purgatives, even if that state of them has existed for some time previous to the attack; but the mode of treatment, described in the preceding part of this plan, must be persisted in, until the pain and vomiting have ceased; and even when considerable tenderness remains, it will be better to lessen it by leeches, and await its reduction with patience, than to incur the risk of a recurrence of the primary symptoms, by the too early use of laxatives taken by the mouth.

If the tenderness of the abdomen depart very slowly, it will be preferable to borrow the laxative enema from the other plan.

The laxatives, taken by the mouth, should be of the mildest kind. The *oleum ricini* operates with the least irritation, and is, therefore, preferable to other laxatives; but the use of it, in private practice, is often prevented, by an insuperable aversion on the part of the patient; a solution of potassæ tartras in infusum sennæ, and magnesiæ sulphas dissolved in water, have both been used with advantage; the extractum colocynthidis, given in pills, is also a mild purgative, but is slow in its operation.

Hydrargyri submurias, either alone, or combined with any purgative, must be totally excluded, from its well-known irritating qualities: in every case, in which the employment of it has come under my observation, it has never failed to increase the pre-existing irritation, or to excite it anew.

What has been said of the *horizontal posture*, in the other plan, applies with double force in this; and the auxiliary remedies, there recommended, will be found equally useful in affording relief to the patient.

In closing the description of the two plans of treatment, it must be observed, there is no part of them, therein proposed, that has not been confirmed by reiterated experience; an exemplification of which the practitioner will find in the details of the following cases.

Mrs. Herbert, aged about 22 years, being in the middle of July, 1824, in the last week of pregnancy, complained of obscure darting pains in the abdomen, with occasional vomiting; the bowels were confined; the pulse small and quick; there was great loss of strength, thirst, and expression of anxiety in the countenance. These symptoms might well

have been mistaken for those irregular actions, which sometimes precede labour, had there not been considerable tenderness upon pressure being applied to the sides of the abdomen; moreover, a case, under similar circumstances, had just occurred, of which a young woman was the subject, and which terminated fatally,* warned me of the nature of the disorder. She was bled freely at the arm, the bowels were kept open, and the antiphlogistic regimen enjoined. At the expiration of a week, from the beginning of my attendance, she had a favourable delivery; but the pain and sickness were aggravated by it, and the milk and lochia were suppressed. She con-

* The body was opened by me after death, and exhibited extensive peritoneal inflammation, accompanied with considerable effusion: there were no appearances of gangrene, although the symptoms which precede that termination, as described by authors, were present, previously to her death. The pain had suddenly ceased about six hours before dissolution.

tinued in this state, with only occasional remission of the symptoms, until the 9th of August, notwithstanding the repeated use of the lancet, and the employment, at different times, of about three hundred leeches to the abdomen, which being very tumefied and tender, seemed to receive more relief from them than from any other remedy employed; still the relief was trifling and temporary, and every recurrence to the use of them added greatly to the debility of the now exhausted patient. Blisters, purgatives, and laxative lavements, had been all brought into operation.

On the 10th of August, the disease seemed to have mustered all its forces, for a final and destructive attack; the pain was become most excruciating; the vomiting very frequent; the thirst increased, and the tongue covered with a brown fur; the pulse was very small and quick; there was great restlessness with tossing; the body was much enlarged and very tender; and the patient, wasted by pain and

depletion, was reduced to the last stage of debility. The practice adopted, in this case, having palpably failed, and a perseverance in it promising nothing but an increase of the sufferings of the patient, induced me to substitute a plan of treatment, agreeably to the principles of which it had always appeared to me that this disease ought to be treated; this was forthwith acted upon, and succeeded beyond my most sanguine expectations.

1824.

August 10th, *Vesperè*.

℞. Tr. Opii ʒiʒ.

Decoct Amyli Calef. ʒxij.

Fiat Enema stàtìm injiciendum et octavis horis repetendum, dùm dolor cessaverit.

℞. Pulv. Opii gr. ʒ.

— Antim. gr. iʒ.

— Acaciæ gr. ij.

Conf. Rosæ Caninæ q. s.

Fiat bolus tertiâ quâque horâ sumendus, cum cochlearibus tribus misturæ salinæ.

It gave me great pleasure, on the following morning, to find the patient considerably improved; the pain was allayed, returning only at long intervals, and then comparatively trifling; she slept a great deal, and, on awaking, had a return of the sickness, but it was not so distressing; the tossing and restlessness had ceased; the pulse was more full, and the countenance much improved; the abdomen was still tumid, but not so exquisitely tender. Two enemata had been used, but the first had instantly quelled the pain and sickness, which latter, however, as above described, occasionally returned; the cause of this, after-observation enabled me to discover, and shall be mentioned in its proper place.

August 11th.

Repetatur bolus tertiâ quâque horâ.

Rep. Mist. Salina.

Rep. Enema omnî noctê manêque.

By persevering in this mode of treatment, the pain and sickness had completely subsided.

On the 13th, she complained of pain in the left inguen, and the bowels not having been relieved for *six days*, she was directed, on the 14th, to take oleum ricini, every four hours, until it operated. On the 15th, the pain in the inguen had departed, and was settled in the left leg and ancle, with external inflammation; a common refrigerant lotion was directed to be applied to it, this shortly relieved the topical affection, but was followed by a renewal of the original attack in the abdomen: the opiate enema, in conjunction with the boluses and saline mixture, were again employed with the same remarkable success: the first enema stilled the pain and vomiting, and the inflammation again occupied its former seat, in which it was allowed to remain in quiet possession. After this, she gradually recovered her strength, but the leg continued painful and swelled for some time, and is not yet free from occasional uneasiness.

The unexampled success, attending this method of treatment in the above, almost hopeless

case, encouraged me to use it in others, to ascertain whether it would be equally beneficial in an earlier stage. Several cases occurred, within a short time, which furnished me with an opportunity of putting this to the test; but the authority of authors, of great eminence,* being hostile to such practice, obliged me to proceed with the greatest caution, premising blood-letting and laxatives, with saline medicine, for two or three days, before the use of the boluses, which were alone prescribed, as directed in the case just related, and of the same strength.

It soon appeared, that this extreme caution was unnecessary, and only prolonged the sufferings, and retarded the cure, of the patients; therefore, though the dose of the medicine was not yet increased, it soon began to take precedence of every other remedy, and was found to act most beneficially, when only premised by blood-letting.

With the intention of increasing the sudorific

* Vide Cullen's First Lines, vol. I. p. 261, cccxcv.

powers of the boluses, a larger quantity of antimony was added to them, without, however, the desired effect, as it soon became very evident that they were, by this addition, less efficacious in relieving pain, and were apt to disagree with the stomach; in consequence, the quantity of that ingredient was again diminished, and, after repeated trials, the bolus has been found most serviceable when prescribed with equal quantities of the ingredients.

During my attendance on these cases, repeated observation confirmed me in the opinion of the absolute inutility, and even impropriety, of blisters, while the disease retained its violence, as there was great additional restlessness produced by the irritation they excited: they are, therefore, discarded from this practice, while the stage of active inflammation exists, and are only employed when a soreness of the abdomen is left, after the former is subdued.

Saline medicines were, also, found to increase vomiting, when that symptom was

present, and have been, therefore, discontinued with advantage to the patient, and are only employed when thirst, or heat of stomach, remains, after the other symptoms have been removed.

The two following cases were so very severe, that the opiate enema, with the boluses, were adopted at the beginning, in both of them: the disease was seated in the colon, and, perhaps, extended from the peritoneum covering its arch, through the great omentum, to the stomach.

Mr. Daniels, aged 40 years, of a robust constitution, and of a plethoric habit, sent to request my attendance in the afternoon of September 14th, 1824. He was suffering most excruciating pain in the abdomen, which was swelled and extremely tender, more particularly above the umbilicus. He had been taken ill two days previously, during which, the frequent vomitings, and almost continual diarrhoea, of a greenish black watery matter, and

which still continued, had, with the pain, reduced him to a desperate state of debility. The pulse was small, quick, and feeble; he had great thirst and restlessness, with frequent tossing; the countenance was particularly anxious and almost cadaverous.

Half a pint of blood was taken from the arm.

℞. Tr. Opii ʒij.

Decoct. Amyli Calef. ʒxij.

Mf. Enema statim injiciendum et quartâ quâque horâ repetendum, donec dolor, vomitus, et diarrhœa, cessant.

℞. Pulv. Opii gr. ʒ.

— Antim. gr. j.

— Acaciæ gr. ij

Conf. Rosæ Caninæ q. s.

Fiat bolus tertia quâque horâ sumendus.

The abdomen was directed to be fomented with warm water.

An anodyne liniment to be rubbed on the abdomen, after the fomentation.

Bottles of warm water to the soles of the feet.

Well-strained plain gruel, taken cold, was allowed for diet.

The horizontal posture was strictly enjoined.

September 15th. The vomiting and diarrhœa were completely suppressed by the first enema, and the pain, being nearly subdued, returned only at long intervals; the restlessness had ceased, neither was the thirst so importunate, nor the abdomen so tender nor large; the blood, taken yesterday, was highly buffy and cupped, and the coagulum had that deep black appearance, common in cases of great debility.

Repetatur bolus tertiâ quâque horâ.

He continued on this plan, until the 17th, when being free from pain, but the bowels having been confined since the 14th, he took

a draught of potassæ tartras, with infusum sennæ, which, in operating, caused some pain, and rather increased the tenderness of the abdomen.

Repetatur bolus tertiâ quâque horâ.

The boluses relieved the irritation, and he continued to mend fast; by the 19th, the tumefaction of the abdomen was completely removed, and but little soreness left; the bowels requiring further relief, he was prescribed some more of the potassæ tartras, with infusum sennæ, which occasioned some slight irritation.

Repetatur bolus ter de diê.

21st. All the symptoms removed.

Repetatur bolus bis in diê.

The patient was allowed to rise from the horizontal posture; he gradually returned to his usual diet; and perfectly recovered his health.

The following case is similar to that just related.

John Lawler, aged 50 years, of a spare habit, requested my attendance in the afternoon of the 15th September, 1824. He had complained, for the last two days, of severe pain in the abdomen, which was then become so violent, that in the exacerbations which were frequent, he cried out loudly with the intolerable agony; the abdomen was exceedingly tumefied and tender; he had frequent vomitings of a coffee-ground appearance, and an almost incessant diarrhœa, of a black liquid matter; his pulse was quick and feeble; his extremities cold; there was great thirst, tossing, and restlessness; the countenance was sunk, pale, and exceedingly anxious. Under these circumstances, he was not bled.

℞. Tr. Opii ʒj.

Decoct. Amyli ʒxij.

Fiat Enema statim injiciendum.

R̄. Pulv. Opii gr. ʒ.
 — Antim. gr. j.
 — Acaciæ gr. ij.
 Conf. Rosæ Caninæ q. s.

Fiat bolus tertiâ quâque horâ sumendus.

Fomentation to the abdomen.

Anodyne liniment.

Diet. Cold barley-water and gruel.

Horizontal posture.

The relief from pain, sickness, and diarrhœa, almost instantaneously followed the use of the opiate enema; slight pains were felt occasionally, on the following day, accompanied with a little sickness, both of which were, however, removed, by continuing the boluses every six hours. The bowels continued confined up to the 18th, when oleum ricini was prescribed, which operated easily; the tumefaction of the abdomen had, by this time, subsided, and he shortly recovered his appetite and strength.

In this case, the extreme exhaustion of the patient deterred me from bleeding: his reco-

very, however, did not seem to be at all retarded on that account; as the tenderness and swelling of the abdomen diappeared much earlier in this than in the former case.

These two cases clearly demonstrate, that it is a great error to apprehend any danger from the retention of this discoloured excretion; and prove, that it is so far from contributing, by its confinement, to the increase or continuance of the disease, that on the contrary, the safety of the patient depends upon allaying the morbidly-excited secretory action which produces it.

Opportunities have been afforded me of observing the fatal effects consequent to an opposite practice, when the practitioner, suspecting that the irritation proceeded from this altered, and, in his opinion, acrimonious excretion, has been thereby induced to persevere in a course of purgatives to remove it.

There is, clearly, no acrimony in this kind of excretion, otherwise the anus would be

excoriated by it, which has never, to my knowledge, been complained of: and, again, had it possessed this quality, the disease, in the two cases just related, would have been aggravated by the treatment, as the confinement of this excrementory matter was not likely to lessen its supposed virulence.

Another fatal error, in the treatment of acute abdominal inflammation, more especially when it occupies the small intestines, and is attended with obstinate constipation, arises from the supposition that the pain and vomiting proceed from an *obstruction* in the course of the intestinal canal, occasioned by hardened feces: to remove this fancied obstacle, irritating purgatives are perseveringly prescribed, with the certain effect of aggravating the symptoms present, without, however, procuring the evacuation of any solid feces; and often a state of the bowels is thereby induced, similar to that mentioned in the two last cases.

Opportunities have been afforded me of

opening bodies, in which such obstruction had been imagined to exist, and the purgatives used had produced only a dark watery discharge, when the post mortem examination proved, that the intestinal canal was perfectly destitute of feces, or of any substance whatever; so that the evacuations, effected by the purgatives, must certainly have been the produce of preternaturally-increased secretion, occasioned by their irritation.

The cases already related, show that a confined state of the bowels, in this disease, may exist, not only with impunity, but advantage to the patient. The following cases will serve to exemplify this, in a manner more striking, as well as to show with what facility the disease may be arrested, by the treatment recommended in the *second plan*.

Sarah James, aged 26 years, of a sanguine temperament and delicate constitution, requested my attendance in the evening of April 17th, 1827. She had been suffering, since the

morning, from violent pain in the abdomen, which was become exceedingly severe, and had frequent exacerbations; the abdomen was very tender and tumefied; she had frequent vomiting, of a green watery liquid; the pulse was small and quick; the countenance was pale and expressive of great anxiety; there was great prostration of strength, thirst, and restlessness; the bowels had been relieved that morning, previous to the attack.

Vespère, 9 o'clock.

℞. Pulv. Opii,

— Antim.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus statim sumendus, in horâ repetendus, et secundâ quâque horâ continuandus, donec dolor cessat, et quartis postea vel sextis horis.

A pint of blood was taken from the arm.

Horizontal posture.

Warm fomentation to the abdomen.

Bottles of warm water to the feet.

Diet. Toast-water and plain cold gruel.

18th. The pain and vomiting had abated at three o'clock in the morning; the former only returned at very long intervals, and was comparatively trifling; the abdomen was less tender and tumid; there was still considerable thirst; the blood was highly buffy and cupped.

Repetatur bolus quartà quâque horâ.

19th et 20th. Pain quite relieved; abdomen less tender, and the tumefaction subsiding fast; bowels being confined, an infusion of rhubarb, with manna and magnesia, was prescribed, without effect. Lavements, containing castor oil and thin gruel, were directed to be injected three times a day, but were returned undischarged.

21st. Patient perfectly easy, but the bowels still confined. She was now directed to take

a solution of magnesiæ sulphas, which operated freely. On the following day, she was permitted to sit up.

A case, strikingly similar to this, occurred some time after.

William Gridley, aged 40 years, of a phlegmatic habit, and debilitated constitution, requested my attendance in the afternoon of December 4th, 1827. He had been attacked, about two o'clock of the preceeding day, with pain in the abdomen, which had gone on increasing, accompanied with vomiting, until the time he sent for me. The pain was now become intolerable, and had frequent exacerbations; the abdomen was tumefied, and so exceedingly tender, that he had raised himself upon his hands and knees to avoid the weight of the bed-clothes; he vomited frequently a darkish-green liquid streaked with yellow; his countenance, naturally pallid, now evinced much anxiety; he complained of great thirst; the bowels had not been relieved for two days.

2 o'clock, P. M.

A pint of blood was taken from the arm.

℞. Pulvis Opii,

— Antim.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus statim sumendus, in horâ repetendus et secundâ quâque horâ continuandus, donec dolor cessat et postea quartis horis.

Horizontal posture.

Bottles of warm water to the feet.

Diet. Toast-water and cold plain gruel.

At 10 o'clock, P. M.

The pain and sickness were considerably abated, returning only at long intervals; he was now lying on his back, and could converse with freedom; the skin and extremities were quite warm.

December 5th. In the course of the night, the pain and sickness were completely arrested; the abdomen was still very tender and

much enlarged, but could bear slight pressure tolerably well.

Repetatur bolus quartâ quâque horâ.

He was directed to take some castor oil at bed-time, and to repeat it, every four hours, until it operated.

6th. He remained free from pain, the swelling of the abdomen being nearly subsided, and the soreness comparatively slight; the bowels were not yet relieved.

Perstat in usû Olei Ricini.

On the evening of this day, he had taken more than six ounces of olei ricini without effect; several soap lavements had, also, been injected, but were returned unaltered; a lavement, containing spt. terebinth. was then used, which had the desired effect on the following morning. All the symptoms were now completely removed, and, on the following day, he was permitted to sit up.

In the former of these two cases, the bowels

were allowed to be in a confined state, for four days, and in the latter, for five, without any inconvenience to either patient, who were both labouring under that variety of the disease, termed Enteritis, by authors. A long list might be added to these of similar treatment, under the same circumstances, in which the happy issue has justified and confirmed the propriety of the departure from common practice. Had a purgative and depleting plan been adopted in these two cases, at the outset, it is easy to conceive that there would have been, probably, a very different result; the third or fourth day would still have found the patients writhing under their sufferings aggravated by repeated purgatives, and their strength reduced to the lowest ebb by these, venesection, and pain.

The following case is one in which the use of purgatives was allowed to a patient, who had a great dread of constipation.

Miss C. aged 30, of a plethoric habit, desired my attendance early in the morning of

July 16th, 1825. She had been suffering from wandering pains of the abdomen, for some days, and these were become continued during the past night, and had frequent exacerbations; the abdomen was rather enlarged and very tender; the pulse was natural, there was no vomiting, but great thirst; the bowels were confined.

The patient attributed her complaints to the last-mentioned circumstance, and was desirous of taking an aperient; she had a decided aversion to olei ricini, so a mixture of potassæ tartras, with infusum sennæ, was prescribed, which, in a few hours, operated freely, but with an aggravation of all the symptoms; the pain was increased, and the abdomen more tense and tender.

A pint of blood was taken from the arm.

℞. Pulv. Opii,

— Antim.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus quartâ quâque horâ sumendus.

Horizontal posture.

Warm fomentation to the abdomen.

Bottles of warm water to the feet.

Diet. Toast-water and cold barley-water.

17th. Pain not so severe; tenderness of the abdomen less.

Repetatur bolus quartâ quâque horâ.

In the evening, the patient took some of the aperient mixture, which operated.

18th. Pain increased; tenderness of the abdomen more considerable.

Repetatur bolus quartâ quâque horâ.

19th. Much better; bowels confined.

The patient now expressed a desire, with so much earnestness, to have the bowels freely relieved, that she was indulged, and took the aperient mixture, in such a manner, as to obtain very copious watery evacuations during the day and following night. Whilst under the operation of the laxative, she, of course, took no boluses.

20th. The pain returned violently, and the abdomen became more tender.

A pint of blood was taken from the arm.

Repetatur bolus quartâ quâque horâ.

It would be tedious, to go through the whole of this case in detail; it will be sufficient to say, that the patient renewed the purgative twice after this, with a similar result; when finding no solid evacuations could be obtained, and the pain so much augmented by the means used to procure them, she submitted to my advice, and was so far recovered by the 27th, that she ventured to get up without permission: a return of pain, and a soreness of the abdomen, was the consequence; she was again bled, confined to the horizontal posture, prescribed the boluses as before, and after a few days, of passive obedience, completely recovered.

It will be readily seen, in reviewing this case, that my new method of treatment was

but still in progress, and was proceeded in with great caution. Had the boluses been given at the onset, in the same manner as they are now prescribed (see treatment, 2nd plan,) the case would have been relieved within the first day. The use of the purgatives was highly improper, as the result proved; but nothing could overcome the conviction of the patient that there was an obstruction from accumulated feces, which required removal, until the constant return of exceedingly-exasperated pain, which the purgatives occasioned, made her yield to my directions. The repeated bleedings were quite unnecessary, as the case would have done equally well without them. Again, the rising from the horizontal posture, before the pain and tenderness were quite relieved, occasioned the disease to return with its original violence.

On this latter circumstance, it is necessary to remark, that the disease is always aggravated and protracted when that position of the

body is not observed; or if it be departed from, before the pain and tenderness of the abdomen be completely relieved, a return of the disorder may be always expected. This fact has come so repeatedly under my observation, and has, hitherto, been so little attended to in practice, that it will be necessary to make some further remarks upon it. The patient is easier in this position; it has often occurred to me, when called to patients suffering from this disease, to find them in a sitting posture, writhing with pain, when, upon being immediately laid in an horizontal position, comparative relief has been afforded. The reason for this appears to be found in the pendulous state of the abdominal and pelvic viscera, and in the important functions which they have to perform; and it may be observed, that nature has established the same state and condition in all parts, where great secretion is required, as for instance, in the mammæ of females.

All these organs have to produce a large secretion, and in proportion to the quantity of secretion required, so must a proportionate quantity of blood be supplied; and this suspensory state is, evidently, most favourable for its accumulation; meeting with comparatively little resistance in its descent through the arteries, and pushed on by the full force of the heart, from which it has just departed, assisted by the attraction of gravitation, to the laws of which all fluids, however situated, must be obedient; this latter power, at the same time, retarding the return of the blood through the veins, so that this important fluid is thus detained long enough for the elaborate formation of the multifarious secretions, proper to these viscera.

Where acute inflammation takes place, the extreme ramifications of the arteries are, by the preternaturally-increased action, excited in them by this disease, distended with blood, in a much greater degree than in a state of

health; the red globules being forced into vessels, which, in a natural state, are not of capacity to receive them: this state of the vessels, being the offspring of morbid irritation, becomes itself the cause of further irritation, by the unnatural distention of their coats; at the same time, the superfluous blood, acting as an extraneous substance, exists as another cause of irritation, superadded to the former; every fresh influx of blood must add to this irritation, so long as the vessels are distended beyond their natural diameters.

The horizontal position, by taking off the weight of the column of blood in the arteries, and favouring its return by the veins, certainly facilitates the arrest of this congestion. The method of treatment here recommended, also requires, that the horizontal posture should be more particularly observed, from the well-known effects of the principal remedies in any other position.

The following case of acute inflammation

of the stomach, will serve to point out anew the necessity of the horizontal posture.

Mrs. G. aged 35 years, of a plethoric habit, desired my attendance in the night of December 24th, 1827. She was suffering from violent pain in the stomach, having frequent severe exacerbations, with great tenderness upon pressure being applied to the epigastric region: she was vomiting frequently a green liquid matter mixed with bile; there was a sense of heat in the stomach, with great thirst, tossing, and restlessness, and considerable prostration of strength, with small quick pulse.

She had an objection to blood-letting, which was, therefore, deferred.

Horizontal posture.

℞. Pulv. Opii,

— Antim.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus statim sumendus, in horâ repetendus, et secundâ quâque horâ continuandus.

Warm fomentation to the abdomen.

Anodyne liniment.

Bottles of warm water to the feet.

The pain and vomiting were by these means removed before day-light, and feeling herself in the morning comparatively well, she ventured to get up. In the afternoon of that day, (the 25th,) all the symptoms returned with increased violence; the pain was almost intolerable; the sickness incessant; the heat in the stomach, which now seemed extended to the œsophagus, was so much increased, that she complained of the ejecta scalding her throat, though it had not that effect in the mouth, and from the same cause, toast-water and gruel hurt her throat in swallowing them; there was great prostration of strength, with thirst; pulse small, quick, and feeble; skin and extremities cold; the countenance, though naturally florid, was now pale; and the tongue covered with a white glairy fur.

A pint of blood was taken from the arm.

5 o'clock, P. M.

Repetatur bolus omnî horâ.

10 o'clock, P. M.

Vomiting ceased; pain much relieved.

Repetatur bolus secundâ quâque horâ, donec dolor cessat.

26th. Sickness and pain quite removed; stomach very tender; skin and extremities warm, with moist skin.

Repetatur bolus quartis horis.

Vesperè.

Castor oil directed to be taken, every four hours, until it operated.

27th. Bowels relieved; great soreness of the epigastric region, and thirst.

Capiat misturæ salinæ cochlearia tria quartâ quâque horâ.

The soreness and heat of the stomach continued for some days, and after the departure

of these, it was a considerable time before the patient could bear solids, or warm drink.

Mrs. G. had a similar attack in May, 1828, which was again relieved by bleeding at the arm, and nine of the boluses: for the tenderness and heat of the stomach, twenty-four leeches were applied to the epigastric region, with the best effect.

There is little doubt that the first case would have gone on well without bleeding, had not the patient imprudently got up too soon; she was so well convinced of this, that she cheerfully submitted to the confinement of the horizontal posture, for some days after the disease was subdued.

The saline mixture was prescribed, in both of these cases, after the subsidence of the pain and vomiting; and then, with evident advantage, cooling the stomach and allaying the thirst.

It is a general observation, that the person who has once had acute abdominal or pelvic

inflammation, is very liable to have a return of it; the truth of this has been fully confirmed in the above patient, who had been visited with two or three previous attacks of peritoneal inflammation.

About this time, another case of acute inflammation of the stomach occurred in a female, aged about 25 years, whose case was protracted to the third day before it was removed, in consequence of the blunders, and officious kindness, of her attendants, who gave her warm tea and buttered toast, as soon as the pain and sickness were relieved; the disease, from this cause, returned with two-fold violence. It was, however, removed by the same means employed in the last case; twenty-four leeches being applied to the epigastric region, to relieve the tenderness and heat of the stomach.

The two following cases of Utero-peritonitis and Peritonitis, occurring after delivery, will show the facility with which this disease may be removed by the treatment recommended.

Mrs. Grimwood, aged 20 years, of a plethoric habit, was delivered of her first child, on the 16th June, 1828. She required my attendance in the evening of the 21st. She had been complaining, the whole of the day, of pain in the body and back, which was now become very severe; the pain shot through the abdomen from the loins, and thence down the thighs; it was so intolerable in the exacerbations, which were very violent and frequent, that she was forced to cry out; the abdomen was very tender, and becoming tumid: the uterus could be felt like a ball over the pubis; the milk had disappeared; there was great thirst; tossing and restlessness, with Ischuria; the pulse was full, quick, and strong; no vomiting.

A pint of blood was taken from the arm.

Horizontal posture.

℞. Pulv. Opii,

— Antim.

— Acaciæ āā. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus statim sumendus, in horâ repetendus, et
binis horis continuandus, donec dolor cessat.

Warm fomentation to the abdomen.

Anodyne liniment.

Bottles of warm water to the feet.

Diet. Toast-water and cold barley-water,
or gruel.

22nd. The pain was completely relieved in
the course of the night, and the tenderness
considerably lessened; the uterus had lost its
hardness, and was diminished in size; but the
tumefaction, which had gone on increasing
until the pain had abated, still continued un-
diminished.

Repetatur bolus quartâ quâque horâ.

Vesperè.

Sumat olei ricini cochlearia tria quartâ quâque horâ,
donec alvus respondeat.

23rd. The bowels had been relieved, and
the pain was quite gone; but the abdomen
continued very much enlarged; the milk had
returned.

Repetatur bolus sextâ quâque horâ.

The swelling of the abdomen gradually subsided, and the patient slowly recovered her strength. The boluses were continued at bedtime for three or four nights.

The following case of Peritonitis, after delivery, was treated without blood-letting.

Mrs. Crosby, aged 30 years, of a delicate constitution, requested my attendance in the evening of January 12th, 1829, being seven days after her confinement. She complained of great pain in the abdomen, which was enlarged and very tender; the pain had frequent exacerbations; she had vomited, occasionally, during the day; the bowels were confined; the lochia and milk suppressed; the pulse small, quick, and feeble, with great thirst and restlessness.

℞. Pulv. Opii,

— Antim.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus statim sumendus, in horâ repetendus et
binis horis continuandus, donec dolor cessat.

Horizontal posture.

Warm fomentation to the abdomen.

Anodyne liniment.

Bottles of warm water to the feet.

Diet. Toast-water and cold gruel.

13th. The first four boluses relieved the pain and sickness; the tenderness and swelling of the abdomen, the latter of which had not arrived at any great height, beginning to subside. She was directed to take, in the evening, a mixture of potassæ tartras in infusum sennæ, which operated freely, and she shortly recovered her usual health.

The delicacy of the patient's constitution warranted the abstaining from blood-letting, and the event confirmed the propriety of the plan adopted.

Having been long engaged in an extensive practice, many opportunities have been, of course, afforded me of meeting with this variety of the disease; and without a single

instance of failure, since it has been treated in the manner here recommended. It is an invariable rule with me never to bleed, except when the patient is of a plethoric habit, has not had much hæmorrhage, and the symptoms are violent; by this, the recovery has never been retarded; the strength of the patient has been saved; and the milk preserved in its most nutritious state for the benefit of the infant. Cases of this kind, which, by the common practice, are so fatal after delivery, may, by this treatment, be certainly, easily, and expeditiously removed.

When acute peritoneal inflammation precedes delivery, more especially in the latter months of gestation, the practitioner, without the greatest attention, may be fatally deceived; fancying that he is treating those irregular uterine pains so common at that period. The patient complains of pains in the abdomen, having frequent exacerbations; in some cases, vomiting is an accompanying symptom, but

in others it does not exist; the pulse is generally quick, but this is not to be depended upon; the countenance is pallid; there is, occasionally, Ischuria and considerable thirst; but all these symptoms belong to uterine irritation, in the latter months of pregnancy: acute peritoneal inflammation is to be distinguished, from these, only by pressure being applied to the side, under the gravid uterus, where it lies upon the intestines; when pressure is applied to the forepart of the uterus, no pain is generally felt, or, if any, it is referred to the back.* The first case detailed, that of Mrs. Herbert, commenced in this way, and might have been removed, previous to delivery, had the same practice been adopted in the beginning, which occurred to me at the close of it.

* When the patient complains of violent pain and tenderness in the forepart of the uterus, in the latter months of gestation, the disease cannot be mistaken; a case of this kind has just occurred to me, which was relieved by the adoption of the 2nd plan of treatment.

A few cases of this description have happened since, which have been easily removed by one bleeding, and the use of the boluses as prescribed, until the pain has been relieved; afterwards gently evacuating the bowels with oleum ricini; the horizontal posture being, at the same time, strictly preserved.

The alliance, which naturally exists between the acute inflammatory affections of the pelvic and abdominal viscera, is very striking, when the uterus is originally the seat of the disease; as the acute inflammatory action generally extends into the abdominal peritoneum, and in severe or protracted cases, stretches through it in all directions, involving in its diseased agency the peritoneal covering of almost every viscus. Since my present mode of treatment has been brought into operation, the disease has not been suffered to extend so far; for by diminishing the *pain*, its progress is arrested, and by suppressing this altogether, the *diseased action* ceases with it.

It has been stated, in the former part of this work, that when acute inflammation occupies the peritoneal surface of the liver, the same treatment will be required for its removal which is applicable to that disease when situated in any other part of the peritoneum. This affection may often occur alone, from the great surface possessed by that viscus; but it may extend into the neighbouring peritoneum, or itself be involved in the extension of the disease from another part. It has occurred to me, on several occasions, to observe complications of this nature exhibiting the symptoms successively, as well as in combination, that are peculiar to the different surfaces embraced in the affection.

Abraham Humm, of a phlegmatic habit, aged 40 years, requested my attendance in the morning of July 6th, 1828. He complained of acute pains in the right side, which darted up the phrenic nerve to the right shoulder, where he felt a gnawing pain; he had a teasing dry cough, with shortness of breath; the

pain had frequent and severe exacerbations, and was much increased by any attempt to move from the right side, upon which he was obliged to lie; the pulse was full and strong; he had great thirst; the bowels had been relieved on the preceeding day; the pain and difficulty of breathing were both considerably augmented by pressure being applied upon the liver, under the ribs.

A pint of blood was taken from the arm.

Emplastrum lyttæ lateri dolenti applicandum.

A mixture, composed of *magnesiaë sulphas*, with *infusum sennæ*, was directed to be taken, every four hours, until the bowels were relieved.

2 o'clock, P. M.

The pain was much increased and lancinated towards the epigastric region, which was become very tender; he had frequent vomiting; the aperient mixture was rejected; the bowels were not relieved; the pulse was quick and small; there was great prostration of strength.

℞. Pulv. Opii,

— Antim.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus statim sumendus, in horâ repetendus, et
binis horis continuandus.

Horizontal posture.

Bottles of warm water to the feet.

Diet. Toast-water, cold barley-water, and
gruel.

Vesperæ.

The pain in the side and stomach was considerably abated, and the vomiting had ceased; but the cough was still troublesome.

Repetatur bolus quartâ quâque horâ.

7th. The patient could now lie, with perfect freedom, on either side; the pain was very slight, and returned only at long intervals; the cough was very trifling; the tenderness of the epigastrium was much diminished, and he could bear pressure better under the ribs

of the affected side, and nearly take a full inspiration.

Repetatur bolus quartâ quâque horâ.

8th. Pain quite relieved; the patient could breathe with the greatest ease; little cough; bowels confined.

Repetatur bolus sextâ quâque horâ.

Repetatur dosis misturæ aperientis horâ somnî.

9th. The bowels were slightly relieved.

Repetatur dosis misturæ aperientis quartâ quâque horâ, donec alvus benè respondeat.

10th. Bowels freely relieved.

Capiatur bolus horâ somnî et repetatur manê.

The patient was shortly after allowed to sit up.

It is necessary to observe, that the pain and sickness were greatly relieved before the blister had drawn, so that it had very little share in affording relief; the irritation proceeding

from it was, afterwards, exceedingly troublesome, and convinced me that it might have been dispensed with advantageously to the patient.

The following case will show the dependence that may be placed in this treatment, exclusive of blood-letting; being, also, one in which, from the constitution of the patient, and the severity of the attack, it was thought advisable strongly to recommend this operation; but the fears and prejudices of the patient could not be removed, so that the case was treated without it.

Mrs. S. aged 25 years, of a plethoric habit, required my attendance early in the morning of December 8th, 1828. She complained of pain in the abdomen, chiefly above the umbilicus, accompanied with slight tenderness, and vomiting of a bilious nature which had a sour odour; she had, also, a troublesome diarrhœa; the countenance was pale; there was slight thirst; the pulse was small and quick; and the tongue covered with a white fur.

The peculiar sourness of the ejecta induced me to prescribe a cretaceous mixture, with tinct. opii, and a bolus every four hours. She was visited a few hours after, when the disease was found to have assumed its real character. The pain was become very violent, with frequent and severe exacerbations; the vomiting was very urgent, and the ejecta had a green watery appearance; the diarrhœa was almost incessant; the abdomen was swelled and very tender, more particularly above the umbilicus; the pulse was quick and small; the countenance pale and anxious; there was great prostration of strength, with thirst and restlessness.

R̄. Pulv. Opii,

— Antim.

— Acaciæ āā. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus statim sumendus, in hora repetendus et
binis horis continuandus.

Horizontal posture.

Warm fomentation to the abdomen.

Bottles of warm water to the feet.

Diet. Toast-water, cold barley-water, and gruel.

In the course of the day, the pain was considerably abated, and the vomiting, with the diarrhœa, had ceased; there was still a very great tension in the abdomen, and fulness about the epigastrium. The patient could not be prevailed upon to lose blood, either by the lancet or leeches, although the abdomen was exquisitely tender.

Repetatur bolus quartâ quâque horâ.

9th. The pain was completely relieved; she had passed a good night, and had no return of the sickness or diarrhœa; she was in a most profuse perspiration, and complained of heat in the stomach, with headach; the abdomen was not so tender, and was returning to its natural size.

Repetatur bolus sextis horis.

10th. The patient still complained of heat in the stomach and headach, with some fever; the pulse was full and strong.

Capiat misturæ salinæ dosẽ quartâ quâque horâ,
actû effervescentiæ.

11th. The bowels being confined, she took an aperient, which operated gently; after which a light tonic was prescribed, and she soon got perfectly well.

This case appeared to me to be one of acute inflammation of the peritoneum covering the arch of the colon, where it passes under the great curvature of the stomach; to which latter the disease had spread through that portion of the great omentum by which the colon is attached to the stomach. The mucous membrane of the colon must, also, have been involved in the affection.

Cases of this kind, unless carefully attended to, are likely to lead practitioners into fatal mistakes; if, for instance, vomiting be excited

by acute abdominal inflammation, and a quantity of bile be thrown up, it may be pronounced a bilious attack, and treated by emetics and purgatives. It must be kept in mind, that when the gall bladder is tolerably full of bile, vomiting, excited in any manner, is likely to bring it into the stomach; the action of that organ, as well as of the duodenum, being inverted in violent retching: when this is considered, and the shortness of the distance between the pylorus and that part of the duodenum, into which the ductus communis choledochus enters, it will only appear surprising, that *every* effort to vomit does not bring up bile. It is not at all probable, that bile should be forced through so small a duct (being no bigger than a crow-quill) with so much velocity into the intestine, as to regurgitate, through the pylorus, into the stomach, and thus occasion vomiting.

In order to determine with certainty, whether the pain and vomiting proceed from acute

inflammation, pressure must be made upon the part where the pain is felt; when, if this be increased by it, there can be no doubt of the nature of the malady.

The opiate enema would have been employed in the last case, if the patient had not had a decided objection to its use: the remarkable superiority which it possesses over any other remedy, in every stage of this disease, will appear in the following cases.

Hannah Hills, of a plethoric habit, aged 18 years, requested my attendance in the evening of May 24th, 1829. She had most excruciating pain in the abdomen, which had frequent exacerbations; the abdomen was so tender, more particularly about the umbilicus, that she could not bear the slightest pressure; vomiting was almost incessant, and the fluid ejected, which had been at first bilious, was now watery and of a green colour; there was great thirst, with tossing and restlessness, and an expression of anxiety in the countenance,

with considerable loss of strength; the pulse was small and quick. Shortly after the attack had commenced, which was early in the morning, she had taken a purgative, by which the bowels had been freely evacuated, but no relief from pain and sickness was thereby procured; on the contrary, all the symptoms were greatly aggravated.

10 o'clock, *Vesperè*.

A pint of blood was taken from the arm.

Horizontal posture.

Diet. Toast-water and cold barley-water, or gruel.

Bottles of warm water to the feet.

℞. Tr. Opii ʒiʒ.

Decoct Amyli Calef. ʒxij.

Fiat Enema statim injiciendum.

The pain and vomiting were instantly quelled; the patient shortly after fell asleep, and awoke in the morning with no other complaint

than that of tenderness in the abdomen; the following boluses were then prescribed to prevent a return:

℞. Pulv. Opii,

— Antim.

— Acaciæ aa. gr. j.

Conf. Rosæ Caninæ q. s.

Fiat bolus quartâ quâque horâ sumendus.

These were discontinued on the 26th; but the tenderness of the abdomen being still considerable, some leeches were directed to be applied, which had so good an effect, that on the 27th, she was permitted to sit up, and allowed to take some light nourishment. In consequence of the great tenderness of the abdomen, no laxative had been employed; but, on the 28th, the bowels were freely and *naturally* relieved, and the patient soon recovered her usual health.

Mrs. Howard, aged 69 years, of a robust constitution, requested my assistance on the morning of June 22nd, 1829. She had been

attacked, in the night, with violent pain in the abdomen, accompanied with frequent vomiting of a green watery liquid. The pain continued to increase in violence, and was most excruciating in the exacerbations which were becoming more frequent; the abdomen was exceedingly tender; the pulse was small and quick; there was considerable thirst, with tossing and restlessness, and great loss of strength.

Half a pint of blood was taken from the arm.

Horizontal posture.

Bottles of warm water to the feet.

Warm fomentation to the abdomen.

Diet. Toast-water and cold barley-water, or gruel.

℞. Tr. Opii ʒiʒ.

Decoct. Amyli Calidi ʒxij.

Fiat Enema statim injiciendum.

The greater part of this enema being lost in the attempt to administer it, another was shortly after exhibited with more success, the pain and vomiting being instantly relieved after its

introduction; but the latter symptom occasionally returned, in consequence of the patient not rigidly preserving the horizontal posture. One of the boluses, as prescribed in the last case, was directed to be taken every four hours, and on the 23rd, she being more submissive, the vomiting subsided, and the boluses were discontinued. The tenderness of the abdomen having abated by the 24th, and the bowels not having been relieved, she was prescribed the following lavement:

R̄. Tr. Aloes ℥ss.

Magnesiae Sulph. ℥i℥.

Olei Olivæ ℥j.

Aquæ Calidi ℥xij.

Mf. Enema quartâ quâque horâ injiciendum, donec alvus respondeat.

The bowels were freely relieved; she was allowed some nourishment, and, on the 26th, was permitted to sit up.

Samuel Sheldrake, aged 10 years, was visited by me on the morning of July 1st, 1829.

He was, on the preceding evening, taken with violent pain in the abdomen, having severe exacerbations, accompanied with frequent vomiting of a green watery liquid mixed with bile; these symptoms still continued, with great tenderness and tumefaction of the abdomen; the former symptom was chiefly confined to the left side below the umbilicus; his pulse was small and quick; there was great thirst, with expression of anxiety in the countenance, and Ischuria.

Horizontal posture.

Bottles of warm water to the feet.

Warm fomentation to the abdomen.

Diet. Toast-water, cold barley-water, and gruel.

R̄. Tr. Opii min. xl.

Decoct. Amyli Calidi ʒvj.

Mf. Enema statim injiciendum.

The pain and vomiting were instantly relieved, and in the course of the day another

enema was injected, of similar strength, to prevent a return; the departure of the tenderness of the abdomen was accelerated by leeches, and, on the 3rd, the bowels were naturally relieved. The patient was allowed, on the 5th, to sit up.

The predisposition to the disease, in this patient, was occasioned by an accident on the April preceding; for on the 15th of that month, he had the misfortune to fall, from a considerable height, into a lime-pit, the abdomen, in his descent, having struck upon a lump of lime. The injury, he then received, was precisely in the same part, and followed by exactly the same symptoms as those above described. His case was treated according to the second plan, but he did not then completely recover until the expiration of a week.

The following is a remarkable instance of retroverted action in the stomach and intestines, in which even the colon seemed to be included; and is a further proof of the efficacy

of the opiate enema in the disease under consideration.

Mrs. Sansom, aged 27 years, of a delicate constitution, requested my attendance on December 3rd, 1828. For two or three days preceding, she had complained of acute pain in the loins, for which an aperient and volatile liniment were prescribed. The pain had now left the back, and occupied the abdomen; it was very violent, and had frequent exacerbations; the abdomen was tense and tender; she had frequent vomiting of a green watery liquid mixed with bile, great thirst, tossing, and restlessness; the countenance, which was generally pallid, was now expressive of great anxiety; the pulse was small and quick.

She was bled and prescribed the boluses as directed in the second plan; but from general inattention to directions, she was, in the morning of December 6th, in a most alarming state; the pain had increased in violence; the tenderness of the abdomen was very great;

the pulse was very quick and small; the restlessness greater, and the thirst insatiable; in addition to these, the vomiting was almost incessant, and the action of the intestinal canal appeared to be retroverted, for the ejecta were *stercoraceous*.

In this deplorable state, recourse was had to the opiate enema.

℞. Tr. Opii ʒij.

Decoct. Amyli ʒxij.

Mf. Enema statim injiciendum.

The effect was, as usual, almost instantaneous; the pain and vomiting were relieved, the former returning only in a trifling degree, and at very long intervals, the latter was completely suppressed: in order to prevent a return, an enema was prescribed, on the following morning, of the same strength, which occasioned some confusion of head; this was relieved by saline medicines, in a state of effervescence, and the patient perfectly recovered,

feeling the soreness of the abdomen for some days after. The bowels were relieved by aperient lavements.

The second enema should have only contained half the quantity of tinct. opii prescribed in the former, and any consequent unpleasant effects would thus have been avoided.

Equal success attended the use of the opiate enema, in a case quite as desperate as that just related.

Miss B. aged about 23 years, was suffering from a violent attack of peritoneal inflammation, which had continued for more than a week; when, in consequence of an indiscretion in diet, all the symptoms were so far aggravated, on the 3rd of June, 1828, that scarcely a hope could be entertained of her recovery. The pain was extremely severe; the exacerbations frequent; the tenderness of the abdomen so general, that the peritoneum, universally, seemed to be interested in the disease; the vomiting was incessant, and the prostration.

of strength extreme; the pulse was small, quick, and feeble; the extremities cold; the countenance shrunk and extremely anxious; there was great thirst; tossing and restlessness.

In this pitiable, and almost hopeless, condition, the opiate enema was directed to be used.

℞. Tr. Opii ʒj.*

Decoct. Amyli Calef. ʒ xij.

Mf. Enema statim injiciendum, et secundâ quâque horâ repetendum.

The first enema afforded immediate relief from pain and sickness; and upon its repetition these symptoms ceased altogether, she having fallen asleep soon after the exhibition of the latter, and awoke in the morning comparatively convalescent. She had no return of the affection; but the tenderness of the abdo-

* Query? Whether that fatal disorder, the Cholera Morbus of Hindostan, might not be successfully combated by this powerful remedy; Tr. Opii ʒij. for an adult, being injected at once, and ʒj. repeated, every hour, until the attack is subdued.

men, more particularly about the epigastrium, continued for some time after; the saline treatment was, afterwards, adopted, under which she perfectly recovered.

This mode of treatment is peculiarly beneficial when abdominal inflammation occurs in Typhus Fever, adopting either the first or second plan, or both in combination, according to the urgency of the symptoms. The opiate enema has often been employed by me with the most signal advantage, when a colliquative diarrhœa has accompanied that fever, and was exhausting the strength of the patient: also, when there has been a large evacuation of blood by stool, which is almost always accompanied with Petechiæ, the opiate enema is the most efficacious remedy that has come under my notice.

The following is an instance of its successful employment.

Mr. Mills' son, aged 15 years, being in the second week of Typhus Fever, had an attack

of abdominal inflammation supervene, on October 13th, 1828. The pain in the abdomen was severe, with frequent exacerbations; the body, tense and tender; he had no vomiting; the pulse was small and quick; there was great restlessness; the tongue was dry and brown; the gums were but little moist; he had considerable thirst, and the urine was *bloody*; the bowels were moderately open.

The bolus was prescribed, of only half the strength of that mentioned in the 2nd plan, to be taken every three hours, and the usual directions were given for his position, diet, &c. The pain was abated by these means, but the urine still maintained its appearance, and the bowels being confined, on the 16th, a laxative was prescribed, which operated freely; but, accompanying each evacuation, there was a considerable quantity of blood.

On the 17th, the pain in the abdomen was greatly increased; the abdomen was more tense and tumid; the bloody alvine evacuations continued; the urine presented the same

appearance; the pulse was quick and feeble; the prostration of strength was very great; the countenance had an exhausted and haggard look; and the skin had assumed the dark brown appearance so common in the worst cases of Typhus Fever. Under these circumstances, he was treated in the following manner:

Horizontal posture.

℞. Tr. Opii ʒj.

Decoct Amyli Calef. ʒxij.

Mf. Enema statim injiciendum, et quartâ quâque horâ repetendum, manentê dolorê.

℞. Pulv. Opii gr. ʒ.

— Antim. gr. j.

— Acaciæ gr. ij.

Conf. Rosæ Caninæ q. s.

Fiat bolus secundâ quâque horâ sumendus.

Warm fomentation to the abdomen.

Bottles of warm water to the feet.

Diet. Toast-water, and cold barley-water, or gruel.

18th. The pain in the body and hæmorrhage were checked by the use of the first enema, three of which were, however, given as directed; the countenance no longer had that exhausted appearance; the pulse was more full; the restlessness had ceased; he had had some sleep, and he described himself as feeling better and stronger; the urine had lost its deep red colour, and was become more transparent; the body was still very tense and tender.

Applicentur abdomini hirudines duodecim.

Repetatur bolus quartâ quâque horâ.

Adhibeatur Enema ter diê.

From this to the 23rd, the use of the enema was continued in the same manner, not because the patient was in pain, for that had been subdued on the first day of its use; but because nothing seemed to give him so much support, and he repeatedly expressed his satisfaction at

the benefit he received from them, saying, they nourished him. By the 25th, his strength was greatly improved, and he could take nourishment; his bowels having been confined for nearly a week, he was directed to take some castor oil, which operated pleasantly, and the case went on steadily to a happy termination.

A general description of the following cases will suffice to show, that this practice is adapted to every case of acute abdominal inflammation, by whatever cause produced, except Strangulated Hernia, while the strangulation still continues, or when the organization of any viscus is destroyed by mechanical or chemical means.

A case of acute abdominal inflammation, which occurred in consequence of taking poison, was successfully treated after the manner recommended in the 2nd plan.

Mr. Chaplin requested me to attend Joseph Meeking, aged 14 years, who was in his service; this was on the evening of October

11th, 1824. The boy had swallowed oxalic acid, and appeared to be in a hopeless state; his countenance was of a death-like paleness, and his features shrunk; he was nearly insensible, and was continually, but faintly, vomiting; his extremities were cold, and his pulse was scarcely perceptible at the wrist. By the persevering use of the common remedies, for four hours, the poison seemed to be evacuated, and between the hours of twelve and one, at midnight, he was brought into a state of comparative safety.

He was visited by me again, at five o'clock in the morning, when he was found to have recovered entirely from the state of collapse; but, with the reaction, there were, also, symptoms of acute abdominal inflammation. He had violent pain in the abdomen, which had frequent exacerbations; the abdomen was tumid and very tender; he had frequent vomiting; great thirst, tossing, and restlessness; the pulse was quick and hard.

Half a pint of blood was taken from the arm,

The general directions for his management were given, as usual, concerning horizontal posture, &c. the bolus, of half the strength of that described in the treatment, 2nd plan, was directed to be taken, every three hours, until the pain was relieved; the bowels were evacuated by oleum ricini, and in three days he was convalescent.

William Cranfield, aged 30 years, was driving a loaded cart, on July 5th, 1825, when he accidentally fell, and a wheel passed over his abdomen: shortly after reaction, symptoms of acute abdominal inflammation came on, with great tenseness and tenderness in the abdomen; the urine was bloody.

He was bled at the arm; had leeches applied to the abdomen, and the boluses were given until the pain was relieved; the bowels were opened by an aperient mixture, and the usual attention was paid to diet, &c. Under this treatment, the urine returned to its natural colour in a few days, and at the expiration of a week he was convalescent.

Thomas Ladds, aged 17 years, went to water a horse at a pond; he rode into the middle, where the animal became restive and laid down with him; the lad was, consequently, immersed; he did not change his clothes for some hours after; from this cause he had a severe attack of acute peritoneal inflammation, which commenced on the following day. He shortly recovered, by one bleeding, the use of the boluses, as directed in the 2nd plan, and oleum ricini.

A curious feature, in the character of this disease, is the frequent occurrence of Metastasis. Several cases of this kind have come under my observation, which have terminated in different ways, but always with relief to the original affection in the abdomen; and it is no less remarkable, that when this Metastasis has taken place to an extremity, or any other external part, and means are taken to remove it, by refrigerant lotions, or other repellents, it is very apt to leave its new situation, and

return to that from which it had migrated, leaving, however, in each case, the part it occupied swelled and tender.

The first decided case of Metastasis, that attracted my attention, happened to Thomas Harrison, who had a most violent attack of acute inflammation in the small intestines; this case occurred previous to my adoption of the present practice; the pain and sickness had continued unmitigated for several days, in spite of bleeding, purging, saline medicines, and blisters; and there is very little doubt, that the attack would have terminated fatally, if a very fortunate Metastasis of the inflammation had not taken place to the right ankle joint; there the pain continued to be exceedingly excruciating, for many weeks, until a quantity of matter was evacuated by the lancet, at the sole of the foot, and, also, from the ankle joint; in consequence of the mischief done to the joint, by the violence of the inflammation, he continued lame for nearly two years.

The case of Mrs. Herbert, which is that first described, terminated in Metastasis.

Thomas Dixey, aged 35 years, had the misfortune, on November 7th, 1825, to be buried in a quantity of rubbish, while employed as a labourer in the repair of a building. He had, in consequence, a severe attack of acute peritoneal inflammation, with great pain and tumefaction of the abdomen. On the 14th, the disease was nearly subdued, there being left only some tenderness of the abdomen; but the right foot, which had been uneasy, for two or three days, was now become painful, and, by the 17th, this arose to be excruciating; it continued, in this state, for some time, and when it ceased, left the leg in a very weak state.

Susan Allen, aged 19 years, had a severe attack of Peritonitis, on September 21st, 1824. The symptoms, which were very severe, were relieved by Metastasis of the inflammation to the instep of the left foot; a refrigerant lotion was directed to be applied to this, which relieved

the topical affection, but this was attended with an exasperation of the abdominal symptoms; a warm poultice was, therefore, substituted, when a fluctuation of matter was apparent, on the evening of the 24th; the abscess was opened and a quantity of pus let out, after which the patient soon got well.

The next was a very singular case; the subject of it was Mrs. Goodwin, aged 35 years, of a very scrofulous habit; and it must be remarked, that patients of this description are very tenacious of abdominal inflammation, when the disease is once established. She requested my attendance, November 22, 1828. The disease seemed to embrace the stomach, small intestines, and convex peritoneal surface of the liver, for all the symptoms, peculiar to these varieties, were present, and in a violent degree. From disobedience to directions, the disease was protracted to a longer period than usual. The pain had, however, left the abdomen, on the 27th, which was still very tender,

and attacked the muscles of the loins in such a manner, that the patient had the symptoms of a severe Lumbago, not being able to move without the most violent pain. A liniment, prescribed for the removal of this, had the effect of renewing the attack in the abdomen; it was, afterwards, expelled from this quarter by a return to the former treatment, and, on the 1st of December, took up its residence in the left leg, occupying chiefly the ischiatic nerve, leaving the abdomen, as before, exceedingly tender. The pain in the leg became so violent, that a liniment was again directed to be used, when the affection of the abdomen returned, and was, afterwards, banished to its situation in the extremity, by the means afore-mentioned, where it was left in quiet possession. The patient continued lame for some time after. It ought to be mentioned, that a cough, and considerable tenderness in the epigastric region and right side, being left behind after the pain had settled in the limb;

a blister was applied which seemed to be of some service.

These cases of Metastasis force us to reflect upon the *manner* in which this change of the seat of the disease is effected; upon the *nature* of acute inflammation, and of the *parts* which it generally occupies.

It is evident, that no *known* laws of the *vascular system* can account for the sudden transfer of the disease to a distant part; that part being mostly an extremity, the foot or leg, with which, and the abdominal and pelvic viscera, there certainly is no *immediate* connexion; or, that if inflammation be supposed to consist, simply, of an increased energy of the arterial system of the part; or, as some authors are disposed to think, a debility of the coats of the arteries, by which a greater turgescence takes place in them than is consistent with their healthy condition; still it would be absurd to imagine this state of vessels to be *transferable* through any *action* of the *vascu-*

lar system, as that is known to be *continuous*; to support this theory, it would be, therefore, necessary to prove, that a volume of blood is, in a case of Metastasis, transferred through the intermediate parts, to take possession of its new seat. This is well known not to take place; on the contrary, the space intervening, between its present situation and the originally diseased part, is untouched; and the extremity, to which it is transplanted, exhibits all the symptoms of acute inflammation, with its consequences.

The circumstances that attend Metastasis taken in connexion with the other phenomena evolved in acute Abdominal and Pelvic inflammation, together with the effects produced by it, in the different structures that compose the viscera which occupy these cavities, afford materials by which, it appears to me, a more accurate knowledge of the disease may be acquired than has hitherto been obtained.

It must be observed, that a part about to be attacked with acute inflammation, is first

affected with *pain*, and that *tenderness follows*. This pain is sometimes spasmodic, as in colic, which is so far from being attended with tenderness, that the pain proceeding from it is *relieved by pressure*; but if the pain of the colic be long continued, a difference in its character takes place, and instead of being relieved by pressure, it is thereby considerably augmented, and a tenderness is felt at the part affected; for the vascular system is now become interested in the morbid action, and a turgescence of the extreme vessels follows, constituting Acute Inflammation, characterized by *acute pain*, and *great tenderness*, in the seat of the affection. So long as the *pain* exists, it is accompanied with the *tenderness*, which is *always exactly proportioned to the violence of the pain*, and abates only when this latter lessens, or departs altogether; the tenderness then diminishes gradually until that, also, ceases.

In Metastasis, the *pain*, more or less,

suddenly leaves the abdomen, still *tender*, and occupies an extremity, where the acute inflammation, if undisturbed, runs its course in the same manner, as if the part, now occupied by it, had been originally the seat of the disorder: if refrigerant lotions be applied to it when superficial, or stimulating liniments when deep seated, it leaves the part, last occupied, *swelled* and *tender*, and returns to its former situation where the original symptoms are again renewed.

From this it appears, that ACUTE INFLAMMATION does not depend for its support and continuance upon the *turgid state of the vessels*, as the latter is only *secondary* and *subservient* to that peculiar *morbid action*, characterized by pain, which always precedes it, and has the power of producing it in any animal structures, but more particularly in those which possess the greatest sensibility.

The vessels, evidently, depend upon this peculiar *morbid action*, for their maintenance

in this preternatural state of turgidity, as shortly after the departure of the former, they return to their original state, if their coats be not so weakened, by the distention, as to render them incapable of recovering their former diameters.

When this latter circumstance occurs, *Chronic Inflammation* is established; for the overloaded vessels, being no longer able to perform the functions peculiar to them, have their natural actions so impaired, or perverted, that all those changes, in secretion and structure, are effected, which have been before described as appreciable after death.*

An experiment upon the eye will exhibit the phenomena of membranous inflammation. If the tunica conjunctiva be irritated, an acute pain is felt, and a turgescence of its vessels instantly follows, which is proportionate to the degree of irritation applied; when the stimulus is removed, the membrane still retains its tur-

* Vide p. 1, 2, 25, and 26.

gescence, which, however, gradually subsides. If the stimulus be reapplied, ACUTE INFLAMMATION will be reproduced, and if the mechanical irritation be continued, an Ophthalmia will be established, terminating like acute inflammation in other membranous parts.

Thus there appear to be two conditions essential to the formation, and existence, of ACUTE INFLAMMATION, one *active*, and the other *passive*; the *former*, which may be properly called *acute inflammatory ACTION*, involving the *latter*, viz. *turgescence of the vessels of the part*, as a necessary consequence.

There is, evidently, a difference in the manner in which this disease makes its progress, in different parts. It extends along the *peritoneal surface* of the intestines in broad bands, which follow the course of those viscera, and are “bounded by the contact of the different portions of the intestines among themselves.”* When it spreads in this manner, it may occupy

* Vide Dr. Baillie on Morbid Anatomy, p. 78.

a great extent of surface, and yet, at length, be subdued, without occasioning any serious lesions of the parts in which it has been situated; sometimes it is discovered in round patches upon the same surface, but in this case, the cellular membrane, underneath, may be suspected to have partaken of the affection.

When ACUTE INFLAMMATION attacks the *cellular membrane*, its progress being interrupted by the peculiar formation of this structure, it does not strike out, in length, as on the peritoneal surface of the alimentary canal, but acts as from a centre, upon a circumference, involving, in turn, each cell around, until the action, in the centre, becomes so intense, that either a *new action*, that of suppuration, supervenes,* and the acute inflammatory ACTION subsides; or, the structure, which composes

* In scrofulous persons, the operations of acute inflammation are always tardy, and, with them, it is very apt, when seated in the cellular membrane, to terminate in this manner.

the centre, becomes exhausted, loses its vitality, and is expelled, by the process of suppuration, as a slough.

When ACUTE INFLAMMATION takes place in the mucous membrane of the *stomach*, the smooth internal surface of that organ, and its great sensibility, are so favourable to the development of this disease, that, unless quickly arrested, it speedily terminates in death.

The structure of the internal surface of the *small intestines* does not offer the same advantages for the extension of this disease, when it attacks the *mucous membrane*; the valvulæ conniventes arresting its progress at every step, from the inequality of surface which they present. The disease is, therefore, comparatively milder, when seated in this portion of that membrane, than it is found to be in the stomach or colon, or in the opposite *peritoneal* surface.*

When the mucous membrane of the *colon*

* Vide Dr. Pemberton on Abdominal Viscera, p. 187.

is affected with acute inflammation, this viscus generally becomes so distended, that it offers a smooth internal surface to the ACTION of the disease, which, therefore, extends very rapidly, and, if not arrested, speedily terminates in death, occasioned by colliquative diarrhoea, or produces other mischief of an irreparable nature.*

The MUCOUS and SEROUS MEMBRANES, belonging to the abdomen and pelvis, are known to possess a *high degree of sensibility*, by their susceptibility to ACUTE INFLAMMATION, and the *extreme pain* attending it.

This naturally leads to an enquiry into the functions and structure of these membranes.

The MUCOUS MEMBRANE, which lines the internal surface of the different hollow viscera, supplies the secretions proper to each of these cavities; while the SEROUS MEMBRANE, which envelopes all the viscera, secretes from its surface a serum for the purpose of lubrication, and

* Vide Dr. Baillie on Morbid Anatomy, p. 100.

thus prevents adhesion between the surfaces of the different viscera, and more particularly facilitates the peristaltic action of the intestines.

In order to perform these functions, the above-mentioned membranes are covered all over with, and even almost composed of, the mouths of minute vessels, these being the capillary extremities of the arteries, devoted to the production of the secretions proper to these membranes, and which have here arrived at their ultimate goal. Interspersed among these are the mouths of absorbents, which, in the mucous membrane of the alimentary canal, convey nutrition to the body, (there are, however, very few in the colon,) and in the serous membrane, their office seems to consist in carrying off the superfluous secretion that might, otherwise, collect in the abdominal and pelvic cavities.

It is now necessary to take a view of that part of the *nervous system* from which these extreme vessels, as well as the whole of the abdominal and pelvic viscera, are supplied.

The stomach alone possesses the advantage of having a nerve *direct* from the brain, the PAR VAGUM, which *expands* upon the coats of that organ, forming the anterior and posterior stomachic plexus; these send some branches to the hepatic and splenic plexus, and, also, to the great solar or cœliac plexus.

All the viscera of the abdomen and pelvis are supplied with nerves from the CÆLIAC PLEXUS, although through the intervention of other plexus, one of which is found at that part of the aorta from which each artery is given off to the different viscera, and whose course and ramifications these nerves accompany to their termination. The *great sympathetic*, also, as it passes through the abdomen, forms connexions with the different plexus that supply the abdominal and pelvic viscera, also, with the *lumbar nerves*, and finally terminates in the Ganglion Impar.

The communication between the *great sympathetic* and the *lumbar nerves*, of which latter the anterior crural and obturator nerves

are, entirely, and the great sciatic nerves, partly, composed, renders a ready solution to the *apparent mystery of Metastasis* of acute inflammatory ACTION, from the abdominal and pelvic viscera, to the lower extremities, which could not be explained by any law that is known to govern the *vascular system*.

The nerves that have accompanied the different arteries from the aorta, may be presumed to form plexus, at every part, where these latter ramify, even to their ultimate ramifications; so that *every* the most minute extreme vessel is supplied with its nerve; but when these vessels open upon the mucous or serous membranes, do these nerves terminate here? or do they again form plexus upon the surface of these structures, having communication with one another, and thus forming a complete connexion between the extreme vessels that occupy the same surface? Analogy gives a strong colour to this supposition, for are not all other nerves expanded at their terminations?

Does, then, this morbid ACTION, which is here styled "ACUTE INFLAMMATORY," consist of *nervous irritation*?

The facts, that *acute pain* is inseparable from it; that it is transferable to a distant part, as in cases of *Metastasis*; that its course, in the abdomen and pelvis, is instantly arrested by the exhibition of the *Opiate Enema*; and that the extreme vessels, *rendered turgid by its agency*, return to their natural state, when this *irritation* is removed, all conspire to prove its *basis to be nervous*.

The comparative insusceptibility of the solid viscera to acute inflammation, appears to proceed from the want of a smooth connected internal surface upon which the mouths of the extreme vessels might form a congeries; so that when this disease takes place in them, it is always very circumscribed; or, if the whole body of the viscus be affected, it is evident that there has been no unity of action in the disease, from the effects produced, as these generally

consist of tubercles,* which are sometimes numerous, having a *space* between each. Does not this show that they have been formed successively, or, that if their formation has been synchronous, that the *action*, which produced them, was isolated?

These tubercles are the production of chronic inflammation, into which acute inflammation, from the peculiar structure of these parts, soon degenerates, more particularly in scrofulous persons, whose comparatively debile vascular system is particularly favourable to its establishment.

For the reasons above assigned, it but rarely happens, that the existence of acute inflammation, when thus situated, is suspected, much less detected, during life; the pain proceeding from it being so circumscribed and comparatively trifling, to that which attends this disease when seated in the peritoneum.

It may be collected from the facts adduced,

* Vide Dr. Baillie on Morbid Anatomy, p. 141—7 and 171.

that acute inflammatory ACTION takes place only in those parts where the minute secretory vessels open, and that the structure, which contains the greatest congeries of these, and presents the largest extent of uninterrupted surface, is the most favourable to the support, extension, and even production, of this disease: thus, it is rarely idiopathic, in the inner membrane of the kidney; it scarcely ever occurs in the inner membrane of the uterus, except when that organ is in a state of *distension*, from previous gestation; while the PERITONEUM,* from its great extent of smooth surface, and the immense number of minute secretory vessels which open upon it, is found to be more frequently the seat of acute inflammation than any other structure in the ABDOMINAL and PELVIC CAVITIES.

* Vide Dr. Baillie on Morbid Anatomy, p. 178.

