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PATHOLOGICAL AND PRACTICAL

# RESEARCHES

ON

# UTERINE INFLAMMATION

# PUERPERAL WOMEN.


By ROBERT LEE, M.D. F.R.S.

SECRETARY TO THE SOCIETY, PHYSICIAN TO THE BRITISH LYING IN HOSPITAL, ETC. ETC.



FROM THE SIXTEENTH VOLUME OF THE MEDICO-CHIRURGICAL TRANSACTIONS, PUBLISHED BY THE MEDICAL AND CHIRURGICAL SOCIETY OF LONDON.

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*Read March 8th and 22d*, 1831.

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IT has been known to physicians from the earliest ages, that puerperal women are liable to attacks of inflammatory and febrile diseases of a destructive character. From the time of Hippocrates to the middle of the seventeenth century, these were generally supposed to depend on inflammation of the uterus, excited by suppression of the lochial discharge, or on certain diseased states of the animal fluids, resulting from pregnancy. In more recent times, the greatest diversity of opinion has prevailed, respecting the nature and treatment of these acute disorders, some referring them wholly to peritoneal inflammation, while other observers, overlooking the local affection of the uterine organs, have described them as specific febrile diseases, under

the terms, puerperal, peritoneal, or child-bed fever.

In October 1829, when I had the honour of presenting to the consideration of this Society, my observations on inflammation of the veins of the uterus, I ventured to infer from the appearances I had witnessed in numerous dissections, "that Uterine Phlebitis is of far more frequent occurrence than has yet been suspected, and that to it must be referred many of the fatal disorders of puerperal women, which have usually been comprehended under the vague designation of puerperal fever or peritonitis."

At that period I had also arrived at the following conclusion, which subsequent experience has fully confirmed, "that inflammation of the uterus and its appendages must be considered as essentially the cause of all the destructive febrile affections which follow parturition, and that the various forms they assume, inflammatory, congestive, or typhoid, will, in a great measure, be found to depend on the serous, muscular, or venous tissue of the organ having become affected." *

From the 1st of January 1827, to the 1st of March 1831, including a period of more than four years, one hundred and twelve cases of well

* Med. Chir. Transactions, Vol. XV. p. 465.

marked uterine inflammation, have come under my observation in the British Lying-in-Hospital, and in public and private practice in the western districts of this metropolis. I have watched the symptoms and progress of these cases with the closest attention, observed the effects of remedies, and where death has taken place, I have carefully examined the alterations of structure, which have remained in the uterine and other organs.

Of forty cases which have proved fatal, the bodies of thirty-four have been examined, and in all of these, which had presented during life, the characteristic symptoms of what has been usually denominated Puerperal Fever, there existed some morbid change from inflammation either in the peritoneal coat of the uterus, or of the uterine appendages, in the muscular tissue, the veins or absorbents of the uterus, to account in a complete and most satisfactory manner for all the constitutional disturbance which had been observed. The peritoneum and uterine appendages were found inflamed in twenty-six cases, in fourteen there existed uterine phlebitis, in eight, inflammation and softening of the muscular tissue of the organ, and in four, the absorbents were distended with pus. The results of these observations, as far as they go, are therefore decidedly opposed to the opinion now generally prevalent in this country, that there is a specific fever, which attacks puerperal women, and which may arise independent of any local

affection in the uterine organs, and prove fatal frequently, without leaving any perceptible change in the organization of their different textures.

In the present communication I propose succinctly to describe the various changes produced by inflammation in the uterine organs subsequent to parturition: to point out the local and constitutional symptoms by which these morbid conditions are characterized during life, and to which combination of symptoms the terms, puerperal, peritoneal, or child-bed fever have been applied by different authors: and lastly, to describe the treatment which experience has led me to consider as the most safe and efficacious.

The following are the principal modifications of inflammation of the uterus in puerperal women which I have observed.

1st. Inflammation of the peritoneal covering of the uterus, and of the general peritoneal sac.

2dly. Inflammation of the uterine appendages; ovaria, Fallopian tubes, and broad ligaments.

3dly. Inflammation of the muscular or proper tissue of the uterus.

4thly. Inflammation and suppuration of the veins, and absorbent vessels of these organs.

These varieties of uterine inflammation may occur wholly independent of each other, though they are most frequently met with in combination. Peritonitis seldom occurs without some degree of inflammation of the uterine appendages, but both these textures may be severely affected, when the muscular coat of the uterus and the veins are wholly exempt from disease. The venous and muscular tissues of the uterus are also liable to severe attacks of inflammation, without any corresponding affection of the peritoneum by which they are covered, though it most frequently happens that inflammation when set up, either in the veins or muscular coat, involves also the peritoneum. In the organs of respiration similar varieties of inflammation may be observed, and the pleura, pulmonary texture, and the mucous membrane lining the air passages, may all be separately or simultaneously involved in the same attack. A similar observation may be extended to the brain and its membranes, and to the whole of the digestive organs, and the symptoms which characterize the inflammation of the different tissues of which these organs are composed have been as accurately determined, as they possibly can be, in the present state of pathological science.

*I. Inflammation of the peritoneal covering of the uterus, and of the general peritoneal sac.*

The effects produced by inflammation of the

peritoneal coat of the uterus in puerperal women do not essentially differ from those produced by ordinary peritonitis in the male sex. Where inflamed, the peritoneum becomes vascular, red, apparently thickened, and a secretion or substance of a yellow colour in the form of false membrane, is thrown out, producing adhesion of the abdominal viscera to each other: or a turbid, serous, whey coloured or red fluid, mixed with shreds of albumen or pus, is effused in greater or smaller quantity into the cavity of the peritoneum.

Puerperal peritonitis usually commences in the peritoneum of the uterus, and extends from thence with greater or less rapidity, according to the severity of the attack, to the general peritoneal membrane. In some cases, the inflammation is confined to the uterus, and it is generally most severe in this organ, or in the parts immediately contiguous. Even when it has extended to the other viscera and affected them most severely, the peritoneum of the uterus invariably exhibits signs of recent inflammation. The lymph is for the most part thrown out in thicker masses around the uterus than in any other situation, and this viscus has seemed to suffer in the greatest degree from the violence of the inflammation.

Sometimes considerable depositions of pus are formed beneath the peritoneal coat of the uterus,

which are either prominent and circumscribed, or diffused throughout the cellular membrane. This infiltration I have most frequently met with at the part where the peritoneum is reflected from the uterus and vagina to the rectum.

Inflammation of the peritoneal coat of the uterus is characterized by great tenderness of the surface of the organ, increased on pressure, and by pyrexia more or less severe. In every instance on a careful examination of the uterine region, there has been more or less pain in it increased by pressure, with constitutional disturbance, though it must be admitted that the pain and febrile symptoms have varied greatly in intensity.

When the attack of peritonitis is severe, the patient commonly lies upon the back, with the knees drawn up to the trunk of the body. At the onset of the disease, the abdomen is generally soft and flaccid, and, except in the region of the uterus, not affected by pressure. Dr. Hulme has described the pain as affecting the whole hypogastric region from the commencement of the attack, but this is the case only where the disease has made considerable progress, or has extended from the uterus to the general investing membrane of the abdomen. Though an enlarged and painful state of the uterus be never altogether wanting, yet the pain

often undergoes exacerbations similar to after-pains, and is often mistaken for them by careless observers, and the disease is thus overlooked till a great part of the peritoneal sac is inflamed, and the case in consequence is rendered hopeless.

The whole abdomen at length becomes distended, tympanitic, and occasionally exquisitely painful on pressure. Vomiting of dark green coloured fluid substances follows. The pulse grows rapid and feeble, the tongue dry and brown, the lips and teeth covered with dark sordes, diarrhœa frequently supervenes, and death ensues at no very remote period.

The invasion of pain in the uterus is sometimes sudden, at other times the ordinary increased sensibility of the uterus, subsequent to the efforts of natural labour, or after pains, passes slowly and insensibly into the acute pain increased by pressure, which is the great characteristic symptom of uterine inflammation. Most frequently the accession of the disease is marked by rigors, partial or general, sometimes so slight as scarcely to be perceived by the patient, at other times so violent as to produce strong succussions of the whole body. The cold shivering after a longer or shorter duration passes away, and is succeeded by great heat of the surface, acceleration of the pulse and of the respiration, thirst, sometimes nausea, and

vomiting, and intense pain across the forehead. The rigors precede, accompany, or follow the increased sensibility of the uterus. In some of the most severe cases, there has been no distinct rigor, but a quick pulse, hot skin, and hurried respiration, have rapidly succeeded to the uterine pain. In some of the most unfavourable cases, the extremities have been cold, and the countenance anxious and pallid, after the disease has been completely formed.

There is no uniformity in the state of the tongue in puerperal peritonitis. It is sometimes covered with a thin, moist, white, or cream-like film, at other times it is red in the centre, with a thick, yellow, or white fur on the edges.

The lochia are often completely suppressed, in other cases only diminished in quantity. The mammæ usually become flaccid, yet in some fatal cases, the milk has been secreted till a short period before death.

Puerperal peritonitis may be confounded with the irregular contractions of the uterus, which constitute after pains and hysteralgia, and it must be admitted that in some cases it is difficult to draw a line of distinction between them. Where the pulse is accelerated, the remissions of pain incomplete, the lochia scanty or suppressed, in a large

proportion of cases we shall arrive at a correct diagnosis by considering the peritoneal coat of the uterus, or its deeper seated tissues in a state of congestion or inflammation, and employing antiphlogistic treatment. There are few puerperal women, except those of a feeble and irritable constitution, or who have been previously exhausted by hemorrhage, or some chronic disease, who are seriously injured by cautious depletion local or general; and where death has followed the abstraction of sixteen or twenty ounces of blood from the arm, the fatal result may fairly be attributed to the disease, and to the neglect of the remedy rather than to its abuse.

Intestinal irritation, depending on a disordered state of the bowels, is also liable to be mistaken for peritonitis, and treated by blood-letting to the injury of the patient. In this affection the abdominal pain is diffused, it is rather a griping than acute pain: it does not commence in the region of the uterus, nor is it aggravated by pressure. The abdomen is generally soft, puffy and distended. The tongue is loaded. There is thirst and headache, the lochia and milk are not suppressed, the febrile attack is usually preceded by evident signs of great intestinal derangement, flatulence, nausea, vomiting, constipation or diarrhœa. The constitutional disturbance attending intestinal irritation, comes on about the end of the first week,

whereas peritonitis manifests itself most frequently before the fourth day subsequent to delivery. The reaction which succeeds to uterine hemorrhage cannot easily be confounded with puerperal peritonitis. The morbid sensibility of the uterus, which characterizes inflammation, and the other symptoms already described are here entirely wanting.

### *II. Inflammation of the uterine appendages, ovaria, Fallopian tubes, and broad ligaments.*

In one case only I have found the uterine appendages free from disease, where the peritoneal covering of the uterus has been inflamed, but frequently the peritoneum has been slightly affected, where the appendages of the uterus have been extensively disorganized. The surface of the broad ligaments, ovaria, and Fallopian tubes, have been red and vascular, and partially or completely imbedded in lymph or pus. The loose extremities of the Fallopian tubes, have been of a deep red colour and softened, and deposits of pus in a diffused or circumscribed form, have taken place in their cavities or in their sub-peritoneal tissues. Between the folds of the broad ligaments, effusions of serous or purulent fluids have also been found.

Numerous important changes have likewise

been observed in the structure of the ovaria. Their peritoneal surface has often been red, vascular, and imbedded in lymph, without any visible alteration of their parenchymatous structure, or their whole volume has been greatly enlarged, swollen, red, and pulpy; blood has been effused into the vesicles of De Graaf or around them, and circumscribed deposits of pus have been found dispersed throughout the substance of the enlarged ovaria. In several cases the entire structure of the ovaria, has been reduced to a broken down vascular pulp, no traces of their natural organization being left. These changes are accurately represented in the drawings now exhibited to the Society.

The ovarium appeared in one instance which I observed to be converted into a large purulent cyst, which had contracted adhesions with the abdominal parietes and discharged its contents exteriorly through an ulcerated opening. In another case which proved fatal, the inflamed uterine appendages, agglutinated together by lymph, had contracted adhesions with the peritoneum at the brim of the pelvis, the inflammation had extended to the cellular membrane, exterior to the peritoneum, and had given rise to an extensive purulent deposit in the course of the psoas and iliacus internus muscles, as in lumbar abscess.

In two other individuals who ultimately re-

covered, the purulent matter, formed in the situation of the psoas and iliacus internus muscles from inflammation of the uterine appendages, made its way through an opening at the upper part of the thigh. Contraction of the thigh on the trunk took place in both these cases, and continued for several months, but disappeared on the recovery of the patient. The uterus remains immoveably fixed to the right side of the pelvis, in a woman who six months ago had a severe attack of inflammation of the peritoneum, and uterine appendages of the same side a few days after delivery.

Inflammation of the uterine appendages being generally combined with peritonitis, to a greater or less extent, it is often difficult to establish a diagnosis between these varieties of uterine inflammation. The pain is less acute than in peritonitis, and is principally situated in one or other of the iliac fossæ, extending from them to the loins, anus, and thighs. On pressure the morbid sensibility will be found chiefly to exist in the lateral parts of the hypogastrium. The constitutional symptoms at the onset of the attack, do not materially differ from those which mark the accession of peritonitis, being often accompanied with strong febrile reaction, which passes speedily away, and is succeeded by prostration of strength, and the other appearances which characterize in-

flammation of the muscular and venous tissues of the uterus.

The following cases have been selected from the whole number observed, to illustrate the morbid changes, which have now been described as occurring in the peritoneal coat of the uterus and in the uterine appendages of puerperal women.

### *CASE I.*

Mrs. Groom, æt. 28, No. 13, Little Coram Street, was delivered of her first child on the 6th March, 1827. On the 8th great tenderness of the uterine region took place, with suppression of the lochia, and febrile symptoms, which, being supposed by her medical attendant to depend on spasmodic contractions of the uterus, were treated with anodynes, and warm fomentations to the hypogastrium.

On the 10th (the 4th day after her confinement, and the first on which I saw her) the abdomen was tympanitic and exquisitely painful on pressure. The pulse 140, and feeble, the extremities cold, countenance haggard. There was incessant vomiting of a dark green fluid with diarrhœa, and she died in the afternoon.

*Dissection.*—The stomach and small intestines were inflated with gas. The peritoneum covering

the fundus and posterior part of the uterus, was of a bright red colour, and the cellular membrane underneath it in this latter situation was infiltrated with pus. The peritoneal coat of the small intestines was highly vascular in different parts, and the surface of the liver was partially covered with lymph. The uterine appendages on both sides were covered with pus and lymph, and the lumbar regions contained about a pint of a wheyish coloured turbid fluid. The consistence of the spleen was remarkably soft.

### *CASE II.*

Elizabeth Marshall, æt. 23, No. 3, Crown Place, Soho. Was attacked on the 4th of March 1827. (the 3rd day after her delivery) with rigors, headache, vertigo, and sense of exquisite tenderness in the hypogastrium and right groin. The milk and lochia soon disappeared; blood-letting was employed on the 8th, and leeches were applied to the region of the uterus, but the tenderness gradually extended over the whole abdomen, which became as large as before delivery, and tympanitic. The pulse was rapid and intermitting. The tongue covered with a brown fur, singultus and vomiting of dark coloured matter succeeded, and she died on the 12th day after the attack.

*Dissection.*—The uterus with its appendages, and the small intestines were all imbedded in

Sir David Barry. Dr. Sims. Mr Read.

thick masses of lymph and closely adhered to one another. The omentum, colon, and peritoneum lining the abdominal muscles were vascular, of a deep red colour, and partially coated with false membranes. About ℥x of sero-purulent fluid were contained in the cavity of the abdomen. The deeper seated tissues of the uterus were healthy.

*CASE III.*

Mrs. Laurens, æt. 42, at No. 5, Cumberland Street, Middlesex Hospital.

After a severe and protracted labour, was delivered of a still born hydrocephalic child on the 12th of February 1828. On the 14th there was a severe rigor, the lochial discharge was suppressed, and the uterus was felt above the brim of the pelvis, large, hard, and exquisitely painful on pressure. The pulse 120, with great prostration of strength.

On the 15th the pulse was more rapid and feeble, the abdomen tumid and every where highly sensible. Vomiting of green coloured matter took place, and she died about sixty hours from the period of delivery.

*Dissection.*+—The uterus uncontracted occupied the whole brim of the pelvis; its peritoneal coat,

+ Mr. Baker St. George's Infirmary

and that of the small intestines and liver was partially covered with thin false membranes, and two pounds of a brownish coloured fluid, with flakes of albumen and pus were contained in the peritoneal sac. A fibro-cartilaginous tumour of considerable size was found imbedded in the muscular coat of the uterus. The uterine appendages on the right side were red and vascular, and the ovarium was unusually soft and about three times the natural size.

*CASE IV.*

Mrs. Tiffin, æt. 32, No. 18, Mercer Street, Long Acre.

Delivered on the 7th July 1829. Labour natural. On the 9th, the uterus was felt above the brim of the pelvis large and hard, and it was very painful on the slightest pressure; lochia and milk suppressed; pulse 110 and feeble; tongue white; bowels open. Slight relief followed the abstraction of fifteen ounces of blood from the arm, and the application of leeches to the hypogastrium.

10th July. The whole hypogastrium is now exquisitely painful, and the abdomen is swollen. Pulse more frequent. There has been much nausea and vomiting during the night. Bowels open. V. S. ad ℥ xxiv. Eighteen leeches to the region of the uterus.

11th. Vomiting continues, abdomen less swollen, and pressure over the region of the uterus produces little uneasiness. Pulse rapid and feeble, respiration hurried, countenance sunk, occasional delirium. The whole surface of the body is now of a deep yellow colour.

She became gradually more feeble, and died in the evening.

*Dissection.* Present Drs. Sims, Clark, and Williams.—The abdomen was distended by a great accumulation of air within the bowels, the peritoneal coat of the small intestines was red, and vascular: the peritoneum of the fundus and anterior portion of the body of the uterus was coated with albumen, and the sub-peritoneal tissue in this situation contained a sero-purulent and gelatinous fluid. From the incisions made into the lower part of the body of the uterus there escaped pure pus, but whether this flowed from the vessels or muscular tissues it was not easy to ascertain. Between the folds of the broad ligaments there was a deposition of a gelatinous and purulent fluid, and both Fallopian tubes were of a deep red colour, softened, and their coats filled with pus. The right ovarium was of the size of a common hen's egg, of a pulpy gelatinous consistence, and its healthy organization entirely destroyed. The whole

presented the appearance of a soft, fibrous, vascular pulp; the left ovarium was similarly affected.

*CASE V.*

Mary Ann Hale, æt. 26, was delivered in the British Lying-in Hospital, on the 24th July 1829. On the 26th she had a severe rigor, which was speedily followed by pain in the region of the uterus, and febrile symptoms: eighteen ounces of blood were drawn from the arm, which produced but little relief; leeches and other antiphlogistic remedies were employed; the whole abdomen however soon became exquisitely tender, without swelling or tension; and death took place on the 29th, the 5th day after delivery. Cough, dyspnœa, and pain in the right side of the chest were experienced during the last two days of her life.

*Dissection.* The peritoneal coat of the uterus and the uterine appendages were coated with false membrane; that covering the small intestines exhibited the usual effects of intense inflammation. Several folds of the ilium were glued together by lymph. The surface of the liver was also coated with albumen, and about two pounds of a whey coloured fluid were contained in the abdominal cavity. The muscular coat and vessels of the uterus were in a healthy condition. In the left side of the

thorax there were traces of recent inflammation in the pleura, and substance of the lungs.

### *CASE VI.*

Elizabeth McCreevey, æt. 25. Delivered of her first child in the British Lying-in Hospital, on the 29th of August, 1829. It was observed in the second stage of labour, that, during each pain, vomiting of a dark coloured fluid like coffee grounds took place. On the morning subsequent to delivery, the pulse was natural, the abdomen was no where tender on pressure, and the vomiting had not recurred.

In the afternoon she was however attacked with acute pain of the belly, rigors, and repeated fits of vomiting, and on the following morning the countenance was expressive of great anxiety, and the abdomen was swollen and extremely painful on pressure. The respiration hurried. Pulse 160 and feeble. Extremities cold. The vomiting continued unabated. Fourteen ounces of blood were taken from the arm, the abdomen was covered with leeches, and calomel and opium were administered every hour.

On the 1st of September, all the symptoms were aggravated, and she sunk in the course of the day.

*Dissection.*—The small intestines, particularly the ilium, were red and vascular, and here and there covered with lymph. A pint and a half of a turbid fluid was effused into the peritoneal sac. The peritoneum of the uterus was covered with florid vessels. The uterine appendages on both sides exhibited the effects of severe inflammation. The omentum, forming a tense broad band in front of the intestines, and firmly compressing them, was found adhering at its most depending part to the peritoneum covering the posterior portion of the cervix uteri. The adhesion of the omentum to the peritoneum did not appear to be recent.

## *CASE VII.*

A patient of the Benevolent Institution, residing in Steward's Rents, Long Acre, who had suffered from anasarca and ascites in the latter months of gestation, was confined on the 5th of October, 1829. On the 7th she had an attack of violent pain in the region of the uterus with pyrexia; dyspnœa and pain in the right side of the thorax were also experienced at the same time. Copious venesection and leeches to the hypogastrium were promptly had recourse to, but the tenderness extended to the whole belly, and it became greatly distended and tympanitic. She died on the 5th day after the commencement of the disease.

+ Dr. Tweedale.

*Dissection.*—The lungs on both sides inflamed and there was a copious effusion of fluid into the sac of the pleura on the right side. About two quarts of sero-albuminous fluid of a whey colour were contained in the peritoneum. The small intestines covered with florid vessels, and patches of thin false membrane. The uterus and its appendages were imbedded in thick masses of soft lymph. The muscular coat and veins of the uterus were healthy.

*CASE VIII.*

Mrs. Long, æt. 29. A patient of the British Lying-in-Hospital, was delivered, after a natural labour, of her first child on the 18th December, 1829. Mr. Stone, under whose care she was placed, and to whom I am indebted for the following report, was not called to see her until the 22nd, when he found her in a rambling state. The face was flushed, head hot. There was no tenderness, nor enlargement of the abdomen: pulse 130. A small quantity of blood was taken away, which was cupped and buffed.

On the 23d, she was considered better. The pulse was not quite so frequent. There was a good deal of rambling, but she had had some sleep. More blood was abstracted from the arm.

On the 24th, the tongue had become brown

and parched; the abdomen greatly distended and painful; the pulse rapid and intermitting.

She died on the 25th. The body was removed to 14, Gray Street, Manchester Square, where I was permitted to examine it with Mr. Prout on the 29th of December.

*Dissection.*—The sac of the peritoneum was filled with air. The whole abdominal and pelvic viscera exhibited the signs of acute inflammation. The omentum, red and thickened, had contracted adhesions by a soft yellow lymph, with the small intestines. The small and great intestines, liver, uterus, and its appendages were all coated with exudations of lymph. The uterine appendages on both sides were intensely red and vascular, and were more deeply imbedded in lymph than any of the other viscera. The muscular and vascular structures of the uterus were healthy.

*CASE IX.*

Mrs. Gyde, æt. 22, Brewer Street, Golden Square, after a natural labour, was delivered of her first child, on the 26th June, 1830. She continued perfectly well till the 28th, when she was attacked with rigors, suppression of the lochia, and great tenderness in the region of the uterus. Venesection to twelve ounces, and leeches to the hypogastrium were employed, and calomel and

opium were administered internally at short intervals by Mr. Stocker, of Welbeck Street, who saw her on the evening of the attack. The symptoms were not however relieved by these remedies. The pain extended gradually over the whole abdomen, during the three following days. The pulse became extremely feeble and frequent. The countenance sunk; respiration hurried. Tongue covered with a brown fur. Constant retching and vomiting. Before death, which took place on the 7th of July, (the 11th day after her delivery,) the belly had become enormously distended, tense and elastic.

+ Mr Stocker

*Dissection.*—About three or four pints of dark coloured sero-purulent fluid were contained in the abdomen. The peritoneal sac and great intestines were distended with a fœtid gaseous fluid. The uterus and its appendages, the omentum and small intestines were all imbedded in lymph, and their peritoneal coat exhibited the other signs of having been severely inflamed. Near the fundus uteri on the left side, immediately underneath the peritoneum, was a circumscribed deposit of pus about the size of a nutmeg. Another abscess of a similar description, was observed under the peritoneal coat of the body of the uterus on the left side.

The other tissues of the uterus were healthy.

*III. Inflammation and softening of the proper or muscular tissue of the uterus.*

The dark coloured mucous layer, which usually coats the inner surface of the uterus after delivery, has been supposed to be the result of gangrenous inflammation, and has been described as such by some pathologists. This ought not however to be confounded with the changes produced by inflammation of the inner membrane of the uterus, when it becomes softened or wholly disorganized like the mucous linings of the stomach and intestines in certain inflammatory affections. In two cases I have met with, the internal membrane of the uterus was soft and flocculent, and had undergone changes similar in appearance to those which are produced in it by maceration. In other cases not only has the internal coat been disorganized, but the muscular tissue to a considerable depth, or even through its entire substance to the peritoneum, has been of a dark purple, greyish, or yellowish hue, and so softened in texture as to be torn by the gentlest efforts made in removing the parts from the body.

The peritoneum covering the inflamed portion of muscular coat of the uterus has also been affected, and lymph has been thrown out over its

surface as in simple peritonitis, or the peritoneum has simply become of a yellow, red, or livid colour, no albumen having been deposited on its surface. The peritoneum has also been softened, where the subjacent tissue has been little if at all affected; more frequently however the softening has proceeded from the internal surface of the uterus to its peritoneal, and the muscular has been extensively disorganized without a corresponding lesion of the peritoneal coat of the uterus.

Inflammation and softening of the uterus have in some cases affected the muscular tissue of the fundus, body, and cervix of the uterus; in others these changes have been limited to the part where the placenta has adhered, which has become unusually thin and reduced to a pulpy state.

Small abscesses have been formed in a few instances in the proper tissue of the uterus, without any perceptible change in the surrounding substance of the organ, while in other cases all appearance of muscular fibre has been lost.

In the works of the different authors on puerperal fever published in this country, the rapid and destructive variety of uterine inflammation now described has scarcely been noticed, though it has been pointed out by several German and

French pathologists. Astruc, Vigarous, and Primrose state, that the uterus is liable to be attacked with gangrene and sphacelus; and other authors have recorded cases where gangrene of the uterus followed acute inflammation of the organ. Professor Boër, of Vienna, has described this affection under the term Putrescence of the Uterus, and has observed its frequent occurrence in particular epidemics*. Luroth†, and Danyau‡, have more recently published extended accounts of this malignant affection, which occurs soon after delivery, and often runs its course with great rapidity. Among the 222 fatal cases of puerperal fever observed by M. Tonellè in the Maternité of Paris in the year 1829, there were forty-nine in which the muscular tissue of the uterus was found softened. M. Tonellè states, that softening of the uterus, after shewing itself frequently in the first half of the year 1829, and particularly about January, disappeared entirely in the months of July and August, which were characterized in a remarkable manner by the frequency of uterine phlebitis. Afterwards it began to rage anew with great violence in September and October, and disappeared again in the

* Naturalis Medicin. Obstetric. Libri VII. Viennæ, 1812.

† Mémoire sur le Ramollissement. Par G. S. Luroth. Repertoire Generale d'Anatomie Pathologique. 1828.

‡ Essai sur la Metrite Gangreneuse. Par A. C. Danyau, Paris, 1829.

last two months, during which time the mortality was inconsiderable.

Considerable obscurity, as has been well observed, exists respecting the ordinary effects of inflammation of the muscular fibres of the body, but one point may be considered as known and established, viz., that a result of inflammation in this tissue of the body is softening and gangrene *. That the destruction of the healthy organization of the proper tissue of the uterus, in puerperal women, is the consequence of an inflammatory process, may be inferred from the symptoms which accompany the disease, and from its occurring in combination with the other varieties of uterine inflammation.

Inflammation of the muscular coat of the uterus most frequently commences with pain of the hypogastrium, irregularity of the lochial discharge, and rigors, succeeded by the other symptoms of pyrexia. The countenance becomes pallid, and is usually expressive of great anxiety and distress. There is often severe head-ache, with delirium and other affections of the brain and nervous system, and so violent have these been in some cases, that the local affection of the uterus has com-

* Pathological and Practical Researches on Diseases of the Stomach. By J. Abercrombie, M.D. Edin. 1828.

pletely escaped detection during life. The skin is hot and dry, and sometimes of a peculiar sallow tinge, the pulse is rapid and feeble. The respiration hurried, with remarkable prostration of strength. The tongue soon becomes foul. The lips covered with sordes: occasional vomiting is experienced. The progress of the disease in some cases is rapid, in others it runs its course more slowly, being protracted to the eighth or tenth day.

It must be admitted, that the diagnosis of this variety of uterine inflammation, particularly where it is complicated with peritonitis or phlebitis, which is frequently the case, is difficult or even impossible. If the attack of inflammation of the muscular coat be sudden and violent, it becomes so speedily complicated with peritonitis more or less acute, that the symptoms are readily confounded together, and it is impossible to distinguish with certainty the symptoms which are to be referred to peritonitis, and those which result from the affection of the muscular coat. The prostration of strength, the alteration of the features, which often exists from the commencement, the feebleness and rapidity of the pulse, the irregular fœtid state of the lochia, are not such constant symptoms as to be pathognomonic, and may arise from other causes. Hence it will appear that the most attentive consideration of the phenomena will not lead us to any certain conclusion as to

the nature of the affection, and as in many other diseases, we can only determine its precise character by the history of its origin and progress, and by the alterations of structure discovered after death. In all the cases of this affection which I have observed, the resources of nature and of art have proved equally unavailing in arresting its fatal course. The active inflammatory symptoms, which commonly manifest themselves at the commencement of the attack, pass speedily away whatever plan of treatment be adopted, and are rapidly succeeded by symptoms of exhaustion. Where the disease is not complicated with inflammation of the peritoneum, the symptoms are not such as to indicate the necessity for the employment of venesection; and in one case where it was adopted freely, the abstraction of the blood was followed by speedy death. In other cases, where the opposite plan of treatment was had recourse to, the fatal result seemed to be less speedy, though equally certain.

A case of spontaneous rupture of the uterus came under my observation in July 1828, and on dissection, the posterior part of the cervix and body of the organ were found converted into a soft gelatinous pulp. Another case was related by Dr. Merriman to this Society, on the 10th of March 1829, in which the same cause appeared to have given rise to a similar result; and here

not only had the parietes of the uterus undergone this morbid softening, but the spleen, liver, and other viscera were found peculiarly soft in their texture, so that the finger could scarcely be put upon these parts without tearing them.

These facts, with those related by Professor Boèr, render it probable that the occurrence of softening of the uterine parietes may occasionally take place during uterogestation, as well as subsequent to delivery.

*Cases of inflammation and softening of the muscular or proper tissue of the uterus.*

*CASE X.*

Mrs. D——, Orange Street, Leicester Square, after a severe and protracted labour was delivered of a still-born child, on the 25th of March, 1829. On the 27th, there was exquisite tenderness of the hypogastrium increased by pressure, with fulness and tension of the whole abdomen. The pulse was rapid and feeble. The lochia and milk suppressed. The tongue was dry and furred. Thirst urgent, with constant nausea. Leeches and warm cataplasms were applied to the region of the uterus, and calomel and opium administered every second hour. The pain gradually extended to the whole abdomen, which was enormously distended. The pulse became still more rapid and

feeble. The tongue brown; teeth covered with dark sordes. Incessant vomiting of dark coloured matters, with low muttering delirium, followed, and she sunk on the 4th of April.

*Dissection.*—The peritoneal surface of the great intestines was remarkably vascular, but no false membrane was observed on any of the abdominal viscera. Several pints of a brown serous fluid were contained in the peritoneal sac; the uterus was large and uncontracted, and its peritoneal coat at the inferior and posterior part was deeply red; its muscular tissue to a considerable extent in this situation, was of a dark ash-grey colour, and so soft as to be lacerated by slight pressure of the fingers. The os uteri at the posterior part was softened and wholly disorganized.

### *CASE XI.*

*Inflammation and softening of the muscular coat of the uterus.*

On the 7th of September, 1829, I was present at the examination of the body of a lady who had died on the 9th day after delivery, with the ordinary symptoms of low child-bed fever*. Little complaint had been made of pain in the region of

* My friend and colleague, Dr. Henry Davies, was consulted in this case, and it was to his kindness that I enjoyed the opportunity of witnessing this dissection, and of examining the bodies of several other women who had died in the hospital.

the uterus. The pulse was rapid and feeble, the respiration hurried, the tongue loaded, with diarrhœa. Before death the whole surface of the body had assumed a deep yellow colour.

*Dissection.*—The uterus occupied the brim of the pelvis. The whole peritoneal sac had a healthy appearance, except a small portion covering the posterior part of the body of the uterus, which was red and vascular, but not covered with false membrane. On cutting into the cavity of the uterus, there escaped a dark coloured offensive fluid. The muscular coat under the inflamed peritoneum, where the placenta had adhered, was converted into a soft flocculent substance, readily broken down with the fingers, and this morbid alteration extended near to the peritoneum. Around this disorganized portion of the muscular and internal coats of the uterus, similar changes, though slighter in degree, were observed in these tissues to a considerable distance, and they had a dark livid colour.

The uterine appendages on the right side were also disorganized by inflammation.

### *CASE XII.*

Mrs. Chapman, æt. 36, No. 9, Belton Street, Long Acre. Delivered on the 19th of August, 1830, labour easy. On the 24th, after drinking

freely of porter, was suddenly attacked with a violent rigor, of long continuance, which was succeeded by acute uterine pain, headache, and great frequency of pulse. No remedies of any kind were employed until the 27th, when I was first called to see her. She had been delirious in the night. The pulse 130, soft and compressible: hurried breathing, great prostration of strength. Tongue brown and furred, diarrhœa, surface of the body of a deep sallow colour. The hypogastrium was painful on pressure, the abdomen generally neither swollen nor tender.

The symptoms became aggravated in the night, and she died on the morning of the 28th.

*Dissection.*—Dr. Sims and Mr. Rice were present. No trace of disease could be detected in the peritoneal coat of the uterus, intestines, or other abdominal viscera, and no effusion of fluid had taken place into the peritoneal cavity.

Both ovaria were enlarged and disorganized, being so softened in consistence as to resemble a rotten pear. Both Fallopian tubes were of a deep red colour, and their cavities were filled with a thin purulent fluid. These morbid appearances were most remarkable in the right uterine appendages. The muscular coat of the greater portion of the body and fundus of the uterus, at the

posterior part, was of a peculiar yellow colour, and so soft, that the point of the fore finger passed through it and the peritoneum covering it, though the parts were dissected out in the gentlest manner. On a careful examination of the uterus, it was found that the whole of the uterine parietes at the posterior part had undergone this morbid change of structure.

*IV. Inflammation of the veins, and absorbents of the uterus.*

The absorbent vessels of the uterus, and receptaculum chyli were observed by Mr. Cæsar Hawkins, to be filled with fluid pus, in a case of fatal uterine inflammation, subsequent to delivery, which occurred in St. George's Hospital in the month of July, 1829. Since that period, I have observed the absorbents in the vicinity of the uterus distended with pus in four cases, and in three of these, there existed inflammation and suppuration of the veins. The late valuable researches of Messrs. Tonellè and Duplay have proved, that inflammation of the absorbents of the uterus, of the receptaculum chyli and thoracic duct, occurs not unfrequently in puerperal women, and gives rise to the same constitutional disturbance as uterine phlebitis.

The presence of purulent fluid in the veins of

the uterus after parturition was pointed out many years ago, by Meckel, Schwilguè, Wilson, and J. Clarke, but none of these authors appear to have been aware of the important fact, which has recently been demonstrated by numerous observations, that a large proportion of the cases usually termed low child-bed fever, or typhoid puerperal fever, arise from inflammation and suppuration of the uterine veins. Exclusive of the cases which have been recorded in the 15th volume of the Transactions of this Society, ten fatal examples of this insidious, and most dangerous affection have fallen under my notice since November, 1829, and from an examination of all these cases it appears that the symptoms of uterine phlebitis correspond in a striking manner with the symptoms assigned by the earlier writers to the putrid puerperal fever, or malignant forms of typhus after delivery.

In the hospitals of Paris much more extended observations than mine have been made by Louis, Andral, and Dance, and it is stated in the Memoir of M. Tonellè, that in 1829, during the prevalence of the fatal epidemic in the Maternité, inflammation of the veins and lymphatics of the uterus occurred in 132 out of 222 cases which were examined after death: and that in 197 cases of the whole, some important alteration of structure was discovered in the uterine organs. M. Duplay has confirmed these observations to the fullest extent,

for he met with eighteen cases of inflamed lymphatics with or without inflammation of the veins, and in all of these the constitutional phenomena were those which characterize phlebitis in other organs of the body and in the other sex.

In a few rare cases described by these pathologists under the term Ataxic Puerperal Fever, the changes which had taken place in the uterine organs, were comparatively slight, and consisted of an exudation confined to the neck of the organ, and a little lymph effused into the cavities of some of the veins. In some of these cases, the symptoms were considerably different from those commonly observed in uterine inflammation, and were probably referrible to other causes *.

* In the anomalous or ataxic form of puerperal fever described by M. Tonellè, there was great irregularity in the progress of the symptoms. The most striking of these were agitation, delirium, and prostration of strength, alternating with one another; frequent syncope, attacks of dyspnœa, temporary disturbance of the circulation and animal temperature, and often with these the symptoms of intense inflammation of the peritoneum or uterus. On examining the bodies after death, scarcely any appreciable lesions were discovered, except those in the veins and about the uterus above mentioned, and none in comparison with the gravity of the symptoms.

A woman who had a tedious and severe labour, which was followed by uterine hemorrhage, was attacked on the third day after delivery with typhoid fever. The labia became affected with gangrene, and she died on the 11th day.

In another case eschars formed on the breasts, sacrum, and

In women who have enjoyed good health during pregnancy, and in whom the process of parturition has been easily accomplished, uterine phlebitis occasionally commences within twenty-four hours after delivery, with pain more or less acute in the region of the uterus, accompanied or followed by a severe rigor, or a succession of rigors, suppression of the lochial discharge, acceleration of the pulse, cephalalgia, or slight incoherence of ideas, with an insuperable sensation of general uneasiness, and sometimes by nausea and vomiting. These symptoms after a short duration are succeeded by increased heat of the body, tremors of the face and limbs, rapid feeble pulse, anxious and hurried respiration, great thirst, with brown dry tongue, and frequent vomiting of green co-

labia, the thighs and heels—and the uterine organs were healthy.

A woman delivered on the 29th of August, 1829, was attacked two days after with prolonged fits of cold shivering, which were followed by copious sweats and some abdominal pains. Delirium, with morbid sensibility of the abdomen, succeeded. Urgent diarrhœa: pulse small and frequent, lochia not suppressed. The 4th day, she had syncope and bilious vomitings; the belly became distended, the pains ceased, dyspnœa with great prostration of strength came on, and she died on the 6th day from the attack.

The peritoneum presented a small quantity of limpid serosity and a slight injection confined to the neighbourhood of the uterus, two or three of the veins contained a slightly turbid serosity which appeared to be the rudiment of pus; the lungs were gorged with blood.

loured matters. The sensorial functions usually become much affected, and there is a state of drowsy stupor or violent delirium and agitation, which terminate in exhaustion. The whole surface of the body not unfrequently assumes a peculiar sallow or deep yellow colour, the abdomen becomes swollen and tympanitic and some of the remote organs of the body, the brain, heart, lungs, liver, and spleen, or the articulations and cellular membrane of the extremities suffer disorganization, from a rapid and destructive congestion, inflammation, or gangrene.

At other times, inflammation of the uterine veins commences at a later period after delivery than above mentioned, and in a much more obscure and insidious form, without either pain or sense of uneasiness in the region of the uterus, or any other local symptom by which the affection can be recognized. The uterus may return to its usual reduced volume after delivery, the lochial discharge may continue to flow, and the inflammation and suppuration of the veins, which have caused the whole of the violent constitutional disturbance and destructive lesions in distant parts of the body, may be wholly overlooked during life. In several cases which I shall now relate, this occurred, and wine, opium, brandy, and sulphate of quinine, with other stimulants, were liberally administered by the medical attendants,

to obviate the debility supposed to be caused by a specific fever, without any local affection of the uterine organs.

Inflammation of veins rarely takes place in any part of the body where it cannot be referred to a wound, or to a specific cause, externally applied to the coats of the vessels. In uterine phlebitis the inflammation cannot, it is true, invariably be traced to the orifices of the veins where the placenta adhered to the inner surface of the uterus, yet it scarcely admits of a doubt but that the frequent occurrence of the disease is the effect of the communication indirectly established between the venous system and the atmospheric air from the separation of the placenta after delivery. In consequence of this separation, the uterine veins are placed in a condition analogous to that of the great veins of the extremities after amputation and extensive wounds, which condition experience has proved to be favourable to the production of inflammation; and inflammation being once excited in the vessels, may extend along the continuous membrane of the uterine veins to the spermatic or hypogastric veins, and from thence to the vena cava, and its principal branches returning the blood from the lower extremities.

" The veins which return the blood from the uterus and its appendages," as I formerly remark-

ed, "may be either wholly or in part inflamed; generally however, and this is a circumstance in the history of uterine phlebitis deserving particular attention, the inflammation attacks the spermatic veins alone, and for the most part, the one only on that side of the uterus to which the placenta has been attached; and it may either confine itself to a small portion of the vessel, or extend throughout its whole course from the uterus to the vena cava. The usual consequences of inflammation of veins are then apparent, viz., injection and condensation of the cellular membrane in which they are imbedded, thickening, induration, and contraction of their coats, and the deposition of lymph mixed with pus and coagula of blood within their cavities.

"The same is the case with regard to the hypogastric veins, one only being generally affected. These veins are, however, rarely inflamed in comparison with the spermatic, and this would seem to depend on the latter veins being invariably connected with the placenta, to whatever part of the uterus it may happen to be attached."* From these facts we have an explanation of the local and constitutional phenomena of phlegmasia dolens, which invariably arises from an extension of the inflammation from the hypogastric to the iliac and femoral veins.

* Med. Chir. Trans. Vol. XV. p. 401.

Though uterine phlebitis be a most dangerous affection, it does not always prove fatal, and that it often occurs in puerperal women where it is never suspected to exist, is demonstrated by the fact, that in the spermatic and hypogastric veins of females advanced in life, calcareous concretions, and disorganizations of various kinds, have frequently been observed, which must have been the consequence of attacks of acute inflammation at remote periods.

### *Cases of uterine phlebitis.*

#### *CASE XIII.*

Mrs. Hickson, a middle aged woman, delivered in the British Lying-in Hospital, on the 14th of November, 1829. On the 3d of December, the day before her death, I first saw her. The hypogastrium was swollen and tense, and on the right side exquisitely painful on pressure. The pulse was 130, and feeble; respiration hurried. The countenance sunk; great prostration of strength. The tongue covered with a dark brown fur; nausea, and urgent thirst. The conjunctiva of both eyes, and the whole surface of the body of a deep yellow tinge. The milk, which was sparingly secreted, was observed to be of the same colour. I was informed that this patient had a very good labour, but that retention of urine took place a few days after she had complained of some pain in the

right side, which was relieved by leeches. She afterwards went on tolerably well, and was up and about till the middle of the third week. She took porter and animal food eagerly till within two days of her death.

The body was removed from the Hospital to Little Brook Street, Hanover Square, where it was examined on the 8th of December.

The peritoneal surface of the abdominal viscera appeared at first sight in a healthy state, and the uterus had undergone the usual reduction of volume, at the same period after delivery. The uterine appendages on the right side were found adhering to the caput coli and to the peritoneum near the brim of the pelvis, by a firm false membrane. The veins proceeding from the right side of the fundus uteri to the spermatic were filled with pus, and the coats of the right spermatic veins, to an extent of three inches from the uterus were greatly thickened, and the cavity obstructed with lymph and pus. The veins in the left superior angle of the uterus also contained pus, and two small purulent deposits were found immediately under the peritoneum in the same situation.

Upwards of a pint of pure pus was contained in the cellular membrane at the brim of the pel-

vis on the right side, and had passed down into the cavity exterior to the peritoneum, as low as the neck of the bladder. The mucous membrane of the bladder near its cervix was intensely red, and partially coated with a thin false membrane of an ash-grey colour.

### *CASE XIV.*

Mrs. Messlin, æt. 22, a patient of the British Lying-in Hospital, delivered on the 13th of January 1830, after a natural labour. During the whole of the following day she complained of an unusual sense of chilliness, with vertigo and slight head-ache.

15th Jan. She now complains of acute pain in the left side of the chest, with confined respiration and cough. There is also great tenderness in the region of the uterus, the body of the uterus is felt above the brim of the pelvis, large, and hard, and pressure over it produces exquisite suffering. Pulse above 100, full, and soft. Countenance flushed ; skin hot. Lochia and milk suppressed. V. S. ad ℥xvi. Hirud. xxiv. Calomel and opium every second hour.

16th. The uterine pain was immediately relieved by the bleeding, but it returned again in the night, when fourteen ounces more were drawn from the arm.

In the afternoon the abdomen was considerably distended, but soft. The uterus still large, hard, and painful on pressure. Pulse rapid and feeble; great prostration of strength. Has been drowsy and oppressed since the morning, and makes no complaint but of distressing sickness at stomach.

During the 17th, the abdomen became more distended; the pulse more rapid and feeble, and she sunk on the morning of the 18th, the fifth day after delivery.

*Dissection.*—The lungs on the left side gorged with blood, pleura healthy. The caput coli and transverse arch of the colon were preternaturally vascular, and here and there covered with patches of lymph. The uncontracted uterus filled the brim of the pelvis. The peritoneum of the anterior part of the fundus and body of the uterus, was of a dusky red colour, and the veins at both superior angles of the uterus were gorged with pus. The spermatic and hypogastric veins on both sides were healthy. The muscular tissue at the anterior and superior part of the uterus, where the placenta had adhered, was reduced to a soft, red coloured, flocculent pulp.

Both ovaria were much enlarged, vascular, soft, and their parenchymatous structure infiltrated

with pus and lymph. Both Fallopian tubes were of a red colour, and contained pus in their cavities.

On the 16th of January, three days after the occurrence of the last case, another patient in the hospital was attacked the day after delivery with rigors, head-ache, and great tenderness of the uterus, with diminished lochial discharge. The pulse was 110, and weak; skin hot; the countenance pale and depressed. The abstraction of ℥xx. of blood from the arm, and the application of twenty-four leeches to the hypogastrium were followed by immediate relief of all the symptoms.

Another case occurred on the same day, which yielded to similar treatment.

*CASE XV.*

On the 19th of January, 1830, with Mr. North of Upper Berkeley Street, I examined the body of a woman in Portman Mews, who had died twelve or fourteen days after delivery. It was stated by her medical attendant that the labour had been natural, and that she continued well till the fifth or sixth day after delivery, when tenderness of the abdomen came on, with fever, which soon assumed a low typhoid type. The pulse was rapid and feeble, and the tongue brown and

parched. Sulphate of quinine and stimulants were liberally administered, but the symptoms assuming a more unfavourable character, Mr. North was called to see her. A puffy swelling of considerable magnitude had appeared over the left wrist, and another in the right thigh, about the middle.

*Dissection.*—A copious sero-purulent effusion into the abdominal cavity. The uterus larger than usual at the same period after delivery. The peritoneum, covering its anterior part, highly vascular, and covered with a thick albuminous layer. The veins proceeding from the left superior angle of the uterus, left ovarium, and Fallopian tube were fully distended with a purulent sanious fluid. The coats of the left spermatic vein, throughout its whole course, were greatly thickened and contracted; the lower half of the inner surface of the vein was lined with false membranes, and the cavity partially filled with pus. The superior half was blocked up with firm coagula of blood. The muscular tissue of the fundus uteri to a considerable extent on the left side was of a dull yellow colour, but the part preserved its natural consistence. The veins on the right superior portion of the uterus were filled with pus. The right spermatic and both hypogastric veins were healthy.

*CASE XVI.*

Mrs. Cox, æt. 19, Mary-le-Bone Street, St. James's, was delivered after a severe and protracted labour on the 1st of December, 1829.

On the 5th she experienced an attack of acute pain in the right side of the hypogastrium, with rigors, sickness at stomach, and diminution of the lochia. Eight ounces of blood were removed from the arm, and leeches applied to the region of the uterus, after which the pain entirely subsided.

On the 7th (the 6th day after delivery), the pulse 130 and feeble. The countenance sunk. Constant drowsiness or dozing, from which she was roused with difficulty. The abdomen soft, tumid, and no where painful on the strongest pressure. Tongue dry; occasional vomiting; bowels open.

8th. Vomiting continues. Tongue foul; great thirst. She now complains of pain on pressure in both iliac fossæ. Abdomen generally soft and puffy. Pulse 140 and extremely feeble. Great prostration of strength.

From the 9th to the 11th, when she died, she was affected with a drowsy stupor, and occasional delirium.

*Dissection.*—Peritoneal surface of uterus healthy. At the left superior angle were several small abscesses, under the peritoneum, and in the muscular tissue of the uterus. The veins here contained pus. The placenta had adhered to the corresponding part of the inner surface. The ovaria were soft, and greatly enlarged. To the left the Fallopian tube was adherent. The internal structure was converted into a dark red coloured, pulpy substance. The right ovarium had undergone a similar change.

### *CASE XVII.*

*Inflammation of the right spermatic vein after parturition, the peritoneal and parenchymatous tissues of the uterus healthy.*

Mrs. Gilland, 30 years of age, was delivered in the British Lying-in Hospital on the 24th December, 1829. The labour was natural, and she had previously enjoyed good health.

On the 28th December, the 4th day after her confinement, she had slight rigors, with headache, but made no complaint of uneasiness in any part of the abdomen. Headache, giddiness, with remarkable prostration of strength, and rapid feeble pulse, were the only symptoms observed until the 6th of January, the day I first saw her.

She was then perfectly conscious, and did not

complain of pain in the head, or of vertigo. The face was flushed, the eyes red. Considerable tremors were observed in the muscles of the face, tongue, and extremities: the articulation was indistinct. The pulse 150, and extremely feeble. Respiration hurried. Tongue dry and brown: thirst urgent. The bowels open. The abdomen was considerably distended, but not tympanitic. Firm pressure over the right side of the hypogastrium produced great uneasiness, though no unusual tension was perceived in this situation.

7th January. Constant dozing in the night without delirium. Face more flushed and eyes suffused. Tongue parched. Teeth and lips covered with dark sordes. Slight tenderness on pressure in both iliac regions. Abdomen more distended. Bowels open. Pulse rapid and feeble. Tremors of the muscles much increased.

8th January. Has been comatose in the night. Aggravation of all the symptoms. Sunk in the evening.

The body was removed from the Hospital to No. 3, Great White Lion Street, where it was examined by me on the 10th January, with Drs. Sims and Hamilton.

*Dissection.*—The uterus had undergone the usual reduction of volume, and at first no morbid

change could be discovered in any of the abdominal viscera, the whole peritoneal sac presented a perfectly healthy appearance, with the exception of a slight adhesion between the right ovarium and Fallopian tube by an effusion of lymph. The veins of this ovarium and Fallopian tube, and the right spermatic vein throughout its whole course, were contracted and lined with an adventitious membrane, and partially filled with lymph and pus. The mouth of the spermatic vein was nearly closed, and the inner surface of the vena cava, about an inch above and below, was covered with shreds of flocculent albumen. The placenta had been attached to the posterior surface and right side of the uterus, but no trace of inflammation could be perceived in the vessels of this or any other part of the muscular tissue of the organ.

### *CASE XVIII.*

*Inflammation of the absorbent vessels and appendages of the uterus.*

Mrs. Wall, æt. 32, No. 89, Berwick Street. Delivered of her second child on the 1st of Nov., 1830. Labour protracted from deformity of the brim of the pelvis. On the morning of the 2nd of November, the day after delivery, she was attacked with acute pain of the uterus, with complete suppression of the lochia, and febrile symptoms. The uterus could be felt preternaturally large and

hard in the hypogastrium, and very tender on pressure. The other parts of the abdomen were soft and flaccid, and not affected by pressure. The pulse was 100, soft and compressible. A pint of blood taken from the arm was followed by syncope and great relief of uterine pain. Eight leeches were applied to the hypogastrium, and calomel and antimonial powder administered every fourth hour. Warm cataplasms were applied over the leech bites.

3d November. Pain of uterus now produces little uneasiness, except when pressure is made over the hypogastrium. The uterus can still be felt unusually large and hard above the brim of the pelvis. Pulse extremely rapid and feeble. Countenance pale and dejected. She is now affected with somnolence to so great a degree that she can scarcely be roused.

She became gradually more feeble and sunk in the night.

*Dissection.*—Two pints of a dark brown serous fluid in the sac of the peritoneum. The right ovarium enlarged to the size of a hen's egg, the surface of a bright red colour, and imbedded in lymph, its structure disorganized, the whole presenting the appearance of a soft cyst, distended with a purulent and gelatinous fluid. The left

ovarium had lost all traces of its natural form and texture, being reduced to a broken down flocculent pulp. The absorbents of the uterus, on the left side and in the left broad ligament were filled with pus. The veins and muscular structure were healthy.

The appearances of the ovaria in this case have been faithfully represented in the drawings presented to the Society.

From the time that the British Lying-in Hospital was re-opened in the course of last summer, for the admission of patients, no case of uterine inflammation occurred until the month of December, when the three following fatal examples of the disease were observed.

*CASE XIX.*

Mrs. Sexton, 30 years of age. Delivered on the 19th of December, 1830. Labour natural. On the 21st had a severe rigor followed by great tenderness of the region of the uterus; headach and suppression of the lochia. Pulse 115, full and strong. Tongue white. Thirst. V. S. ad ℥xx. Hirud. xxxvi. hypogastrio. Hydr. Submur. gr. iij. Opii gr. $\frac{1}{4}$. 4ta. q. q. hora.

22nd December. Blood cupped and buffed. Sensibility of the uterus but little diminished.

Lochia and milk suppressed. Countenance of a dusky yellow hue. Pulse 115 and feeble.

23rd December. Abdomen enormously distended, tympanitic, and exquisitely painful on pressure. Pulse rapid and feeble. Tongue foul; urgent thirst. Somnolence and delirium. Died in the night. Permission could not be obtained to examine the uterus, but the symptoms led to the belief that the peritoneum and deeper seated tissues were inflamed.

### *CASE XX.*

*Veins and absorbents of the uterus inflamed.*

Mrs. Jones, æt. 24. On the 21st December, twenty-four hours after delivery, was suddenly attacked with sickness, vomiting, and severe headache, and rigors. Lochia suppressed. Soreness of the hypogastrium and both iliac regions; features collapsed; hurried breathing; pulse 120 and feeble.

On the 22nd, the pain appeared to undergo a remission in consequence of the remedies employed, but it again became aggravated, as well as all the other symptoms, and she died on the 24th.

*Dissection.*—The placenta had been attached to the left side of the fundus uteri, and the veins at

this part of the uterus were lined with dark coloured false membranes, and gorged with pus. The lymphatics of the left broad ligament were distended with purulent fluid. Both ovaria were enlarged, and reduced to a soft flocculent pulp.

The Fallopian tubes were both red and vascular, and their cavities full of pus. The peritoneal coat of the uterus at the posterior part was inflamed, and about four ounces of yellow serum were effused into the pelvis. A few inflamed patches were observed on the peritoneal surface of the small intestines.

### *CASE XXI.*

*Inflammation and suppuration of both spermatic veins.*

Cecilia Boyd, æt. 31, No. 32, Peter Street, was admitted into the Hospital on the 25th of December, but the labour pains having been feeble and irregular, they were considered spurious, and she was allowed to return to her home after two days. On the 28th, the pains suddenly became so violent that she could not leave her own residence, where she was delivered. The labour was natural.

On the 31st of December, she was attacked with pain in the uterus, rigors, and occasional delirium. Rapid feeble pulse. Countenance pallid. The

abdomen was tumid and soft. The hypogastrium and iliac fossæ painful on pressure.

January 1st. Complete remission of pain, except on firm pressure over the region of the uterus. Constant dozing. Pulse 140. Tongue brown and dry in the centre.

2nd. The symptoms have undergone little change. Still complains of no uneasiness except on pressure. Drowsiness and delirium continue.

3rd. Suddenly seized with excruciating pain of the abdomen and distressing flatulence. The belly became distended. Pulse rapid, feeble, and irregular, and she died on the 4th.

The abstraction of eight ounces of blood from the arm, at the onset of the attack produced complete syncope. In this case mercurial frictions, and calomel and opium internally were employed to a great extent.

*Dissection.*—Abdomen distended with gas. Six ounces or more of red serous fluid in its cavity. Peritoneal sac not inflamed except that portion covering the posterior surface of the uterus, and its appendages. The cellular tissue connecting the peritoneal with the muscular coat, at the back of the cervix uteri infiltrated with pus, as

well as that between the folds of the broad ligaments, on both sides. Both spermatic veins contained pure pus in considerable quantities, as did also the venous branches at the angles, and inferior portions of the uterus. The Fallopian tubes enlarged and vascular. The muscular structure of the uterus healthy. No appearance of pus was observed in the orifices of the veins at the part to which the placenta had been attached.

### *CASE XXII.*

*Inflammation of the veins, absorbent vessels, and muscular tissue of the uterus.*

Mrs. Holding, a middle aged woman, residing at No. 4, Marshall Street, a patient of the Middlesex Hospital, was delivered on the 18th of December, 1830.

On the 21st became affected with extreme soreness of the region of the uterus, repeated attacks of cold shivering, headache, thirst, and suppression of the lochial discharge.

The uterus was large, hard, and exquisitely tender on pressure. The other regions of the belly were soft, flaccid, and wholly free from pain on the strongest pressure. The pulse 130. Countenance pale. Tongue white.

On the 22d and 23rd. Incessant vomiting.

Great prostration of strength. Respiration hurried. Pulse feeble and intermitting. Pain of abdomen gone.

Died in the afternoon.

*Dissection.*—Intestines distended with air. Peritoneal coat of the intestines, fundus and anterior part of the uterus healthy. The peritoneum covering the posterior part of the uterus, and upper part of the rectum coated with false membrane. Both ovaria large and softened to a pulp. The left highly vascular in the centre; the surface of the right covered with lymph. The substance of the uterus at the superior and anterior part, more particularly where the placenta had been attached, so soft as to be readily torn with the fingers and of a dusky yellow colour. The veins at the lower part of the uterus, on the left side filled with pus. The absorbents of the left superior angle, broad ligament, and Fallopian tube also filled with it *.

* Three fatal cases of uterine phlebitis have been observed by me, since this communication was presented to the Society. The symptoms did not differ from those observed in the preceding cases. A fourth example of the disease has occurred in the practice of the Southwark Lying-in Institution, the history of which has been communicated to me, by Dr. Stephen Hall, of Walworth. The placenta being attached over the os uteri, delivery was accomplished by turning on the 5th of May. Until the 11th (the 8th day after her confinement) she seemed to recover favourably, when she was attacked with severe

*Causes of uterine inflammation.*

The *causes* of uterine inflammation in puerperal women, are generally involved in great obscurity. In some cases the disease is distinctly referrible to the injury inflicted on the uterus by severe protracted and instrumental labour, by the forcible introduction of the hand into the uterus, exposure to cold and various irregularities of diet soon after delivery. But most frequently, it arises where none of these causes have been applied, and where we are compelled to refer it to some peculiar constitution of the atmosphere, or to contagious miasmata.

It is a point of the utmost practical importance to determine, how far contagion is to be considered as a cause of the disease; the writers on puerperal fever are however completely at variance on this subject. Dr. Hulme maintains that it is not

diarrhœa. The pulse was 150. The tongue dry and furred, great thirst and heat of skin. No pain in any part of the abdomen. During the seven following days the debility was excessive, and every night there was a rigor followed by copious sweats.

The right spermatic vein from its junction with the vena cava, to its ramifications immediately before entering the uterus, irregularly enlarged to the size of a man's little finger, and of a florid red colour. When laid open it was found filled with pus, a portion of which flowed into the vena cava when the spermatic was pressed, and also through the openings into the uterus: the coats greatly thickened. The other abdominal and pelvic viscera perfectly healthy. The left spermatic also healthy.

more contagious than pleuritis, nephritis, or any other inflammatory disease, and M. Tonellè, who has recorded the history of the most fatal epidemic which has ever occurred in Paris, asserts that contagion was clearly out of the question there, for in the Maternité the women who were newly delivered had each a separate apartment, and yet were attacked with the disease, while in the sick ward of the hospital, no instance of the propagation of puerperal fever ever occurred.

The evidence of M. Dugès, against the doctrine of contagion is still more strong, for he observes, "Nous avons vu mainte et mainte fois des femmes enceintes sejourner dans l' infirmerie environnées de peritonite, sans en prendre le germe ; nous avons vu plus souvent encore dans les infirmeries des femmes recemment accouchées arriver avec une maladie quelconque et ne point contracter la maladie regnante, malgrè les miasmes qui les entouraient; et si quelques examples contraires s'etaient presentés, il eut été trop simple et trop naturel de les expliquer en pareil cas par une infection differente de la contagion des maladies à miasmes virulents.

" Jamais une élève sage-femme chargée du soin de deux femmes à la fois n'a transporté de la femme malade à la femme saine la peritonite, comme on dit l' avoir vu à Londres : et jamais cette

inflammation ne s'est propagée de proche en proche dans les rangs des salles destinées aux femmes bien portantes."

The sentiments of M. Baudelocque accord with those of M. Dugès and Tonellè on the non-contagious nature of the disease*.

In the earlier descriptions however of uterine inflammation or puerperal fever, it is referred not only to the corrupted atmosphere of hospitals, but to contagion. In the Dublin Lying-in Hospital, Edinburgh Infirmary, the General Hospital at Vienna, and in most of the Lying-in Hospitals of this metropolis, it has raged with great violence at different periods as an epidemic, and has appeared to be propagated by contagion. Dr. Gordon, of Aberdeen, states that the disease prevailed chiefly or wholly in the practice of particular midwives, and most of the cases observed by Dr. Armstrong at Sunderland, occurred in the practice of one surgeon and his assistant.—Dr. John Clarke observes: "It is hardly possible to prove that it is not infectious, but it has also arisen, as far as we can judge, as an original disease in private practice where there had been no communication with infected persons." †

* Baudelocque sur la Peritonite Puerperale, p. 128, 8vo. Paris, 1830.

† Dr. J. Clarke, on the Epidemic Disease of Lying-in Women, 1787 and 1788.

It is difficult to reconcile this contradictory evidence, and the facts I have myself observed, though they have inclined me to adopt the opinion that the disease is sometimes communicable by contagion, yet they have not been sufficiently numerous, and of so decisive a character as to dispel every doubt on the subject. In many cases it has occurred in the most destructive form, where the idea of contagion could not be entertained.

In the last two weeks of September 1827, five fatal cases of uterine inflammation, came under my observation. All the individuals so attacked had been attended in labour by the same midwife, and no example of a febrile or inflammatory complaint of a serious nature occurred during that period, among the other patients of the Westminster General Dispensary, who had been attended by the other midwives belonging to the institution.

On the 16th of March 1831, a medical practitioner who resides in a populous parish in the outskirts of London, examined the body of a woman who had died a few days after delivery from inflammation of the peritoneal coat of the uterus.—On the morning of the 17th of March, he was called to attend a private patient in labour, who was safely delivered the same day. On the 19th she was attacked with the worst symptoms of uterine phle-

bitis; severe rigors, great disturbance of the cerebral functions, rapid feeble pulse, with acute pain of the hypogastrium and peculiar sallow colour of the whole surface of the body. She died on the 4th day after the attack, the 22d of March, and between this period and the 6th of April, Mr. —— attended two other patients, both of whom were attacked with the same disease in a malignant form and speedily fell victims to it.

On the 30th of March, it happened that the same gentleman, was summoned to a patient, a robust young woman seventeen years of age, affected with pleuritis, for which venesection was resorted to with immediate relief.

On the 5th of April there was no appearance of inflammation around the puncture, which had been made in the median basilic vein, but there had been pain in the wound during the two preceding days. The inner surface of the arm from the elbow nearly to the axilla was now affected with erysipelatous inflammation. Alarming constitutional symptoms had manifested themselves: the pulse 160; tongue dry. Delirium had been observed in the night.

On the evening of this day, the inflammation had spread into the axilla. The arm was exquisitely painful, but in the vicinity of the wound,

which had a healthy appearance, the colour of the skin was natural, and no hardness nor pain was felt in the vein above the puncture.

On the 6th, patches of erysipelatous inflammation had appeared in various parts of the body, the upper and inner surface of the left arm, and in the sole of the left foot, all of which were acutely painful on pressure. The inflammation of the right arm had somewhat subsided. The pulse was 140. The tongue brown, dry, and furred. Restlessness, constant dozing, and incoherence: when roused she was conscious. The countenance cold, heat of the surface irregular.

The 7th, pulse rapid, countenance anxious, teeth and lips covered with sordes, somnolence and delirium. The left arm above the elbow was acutely painful and very much swollen. The right was but little painful, and the erysipelas had made no further progress. The patches of erysipelas on the forehead and sole of the foot had disappeared, but there was a slight blush of inflammation on the inner side of the calf of the left leg. The symptoms became aggravated and she died on Saturday the 9th April.—I examined the body with Mr. Prout on the 11th, and the following morbid appearances were observed.

The wound in the median basilic vein was

open, and its cavity was filled with purulent fluid. The coats of this vessel and of the basilic vein, to its termination in the axillary vein, were thickened, so as to resemble the coats of an artery. The inner surface of these veins was redder than natural, and at the upper part had lost its usual smoothness, but there was no lymph deposited upon it. The mouths of the veins entering the basilic were all closed up with firm coagula of blood or lymph. The cellular membrane along the inner surface of the arm was unusually vascular and infiltrated with serum. This infiltration was to a much greater extent along the situation of the erysipelatous inflammation of the left arm, but the veins of this arm were perfectly healthy. The abdominal viscera were sound.

Whatever conclusion we may arrive at, on the contagious or non-contagious nature of the disease commonly termed puerperal fever, it cannot affect the view which I have taken of its proximate cause, or essential nature, for the symptoms, morbid appearances, and effects of remedies, all prove, whatever the nature of the remote cause may be, that it acts by exciting inflammation of the uterine organs.

With regard to the nature of this inflammation, it is difficult to determine whether it be of a common or specific kind. It certainly arises where

individuals are not exposed to the ordinary causes of inflammation, and it often reigns as an epidemic particularly in hospitals, and in this respect it resembles hospital gangrene, erysipelas, and other specific inflammatory diseases which are generally supposed to depend on a vitiated state of the atmosphere. Like these diseases too, it ceases without any assignable cause perhaps for several years, and then reappears in the same establishments and is attended with the same destructive consequences.

Pouteau supposed the inflammation of the uterus to be of an erysipelatous nature, and the same opinion was maintained by Drs. Home and Young of Edinburgh, who saw the disease in the Lying-in wards of the Royal Infirmary. Dr. Gordon observed erysipelas to prevail extensively at Aberdeen in 1795, but he has not inferred from this circumstance that the peritoneal inflammation which he has so accurately described, was of an erysipelatous kind, or different from common abdominal inflammation.

Dr. Abercromby has lately described several cases of peritonitis, which he considered to be allied to erysipelas. The principal pathological character of this affection noticed by him is, that it terminates chiefly by effusion of fluid without much, and often without any of that inflam-

matory and adhesive character of the disease in its more common form. Pinel, Bayle, Gasc, and Laennec, to whom we are much indebted for the knowledge we possess of the anatomical characters of inflammation of the peritoneum, have traced no resemblance between the phenomena of puerperal peritonitis and erysipelatous inflammation, and it is still extremely doubtful if serous membranes are liable to attacks of erysipelas. Dr. Hodgkin has stated to me that the appearances after death in puerperal peritonitis, do not differ from those observed in ordinary peritonitis in the male sex.

In the autumn of 1829, a short time before the epidemic broke out in the British Lying-in Hospital which led to its being closed for several months, two children died of erysipelas. In one of these which I examined after death, there were inflammation and suppuration of most of the branches of the umbilical vein, and extensive peritonitis. Another fatal case occurred in the course of the epidemic, and on examining the abdomen I found the peritoneum extensively inflamed, with a copious effusion of sero-purulent fluid. A few days before the reappearance of the disease in the hospital in December last, an infant died of erysipelas of the external organs of generation and abdomen, and the same diseased state of the peritoneum was observed. Another

infant was attacked with gangrenous erysipelas of the extremity of the right forefinger on the 28th of December, whose mother had been cut off on the 24th by uterine phlebitis. Mr. Blagden has related to me a similar case which occurred in his practice last summer. A midwife of the hospital had a severe attack of erysipelas of the face, a few days after attending in labour one of the fatal cases I have related of inflammation of the absorbents and uterine appendages. No. XVIII. These are certainly remarkable coincidences, but they are not sufficient I conceive to establish the fact, that it is an erysipelatous inflammation which attacks the uterus subsequent to delivery.

At the close of this paper, I have placed an abstract of the histories of 112 cases of uterine inflammation, by which it will be seen, that at one period the inflammation affects chiefly the peritoneal surface of the uterus, whilst at another it affects its deeper seated tissues, and in this respect it resembles some other inflammatory diseases of the internal organs, and particularly of the thoracic viscera, which assume an epidemic form.

It may also be observed from an examination of this abstract, that in the course of a few days, in the same ward of the hospital, and in patients who were placed in contiguous beds during the

prevalence of the epidemic, all the varieties of uterine inflammation which I have described, occurred in their most perfect forms. In some the local and constitutional symptoms were immediately subdued by general and topical blood-letting, but in other cases the symptoms were from the commencement such as to contra-indicate the use of this remedy, and it was not had recourse to. Such cases usually terminated fatally in spite of local bleeding, and the exhibition of internal remedies, and on examination after death the veins, muscular structure, or appendages of the uterus, were found to be the textures most frequently inflamed.

This fact, that at different seasons, different textures of the uterine organs are liable to be affected with inflammation, and in varying degrees of intensity, will enable us in some measure to reconcile the discordant opinions contained in the works of authors, both with respect to the symptoms of puerperal fever, and the treatment required in different epidemics.

Until a recent period, the pathological anatomy of the uterine organs in puerperal women, had not received that attention from physicians, either in this country or on the continent of Europe, which its importance demanded. In the histories of the different epidemic fevers of lying-in wo-

men since the middle of the seventeenth century, the morbid appearances on dissection, though often very imperfectly described, nevertheless strongly confirm the opinion that the whole of their phenomena, local and constitutional, are to be referred to uterine inflammation.

In the epidemic of 1664 in the Hotel Dieu at Paris, it is stated by M. Tenon, that the women were attacked with hemorrhage, and that abscesses were found in their bodies on dissection *.

It was observed by M. Malouin in the epidemic which occurred in 1746, that the uterus became dry, hard and painful, and that it was swollen; and that the lochia had not their ordinary course; that the women were attacked with pain in the situation of the broad ligaments, and that the abdomen was tense. " On opening the bodies, curdled milk was found on the surface of the intestines; a milky serous fluid in the hypogastrium: the same fluid was found in the thorax of certain women, and when the lungs were cut, they discharged a milky and putrid lymph. The stomach, the intestines, the uterus when carefully examined, appeared to have been inflamed. According to the physicians there escaped clots (des grumeaux) on opening the vessels of this viscus."†

* Tenon Mémoire sur les Hospitaux de Paris, p. 241.
† Mémoires de l'Academie des Sciences, 1746.

M. Tenon observes in his Memoir on the Hospitals of Paris, that in all the epidemics which occurred from the year 1774 to 1816, during which time the disease had become as it were naturalized, it was successively observed to occur in a simple and curable form, and in another form in which it was complicated and uncontrolled by any remedy.

"The constant symptoms of the simple puerperal fever are the following: rigor, pain, at first slight, in the region of the kidneys, intestinal colic, affecting in a few hours the whole hypogastrium, and gradually becoming more acute. Pulse concentrated, fever moderate, lochia not suppressed, mammæ flaccid. Tongue dry in the middle, covered with a yellow mucus on the edges, hiccup and vomiting of green coloured matters.

"In the complicated puerperal fever, the fever is stronger, with exacerbations, the tongue is black and dry, the belly is tense, distended, and tympanitic, and but slightly painful. In some women the lochia have been either wholly suppressed, or only diminished in quantity, others have experienced attacks of *ophthalmia*, others a red eruption on the arms, or the abdomen; in some the respiration was difficult, in general the blood shewed the buffy coat.

"On opening the abdomen, the stomach, the intestines, particularly the small intestines, were inflamed, adhering to one another, distended, filled with air and a yellow fluid matter. The uterus was contracted to its ordinary dimensions; it was seldom found inflamed. I had occasion to dissect two, in one the uterus contained a coagulum of blood, an infiltration of a milky appearance, or like whey, in certain women existed in the cellular membrane which surrounds the kidneys, sometimes also a thick white cheesy matter was met with. We neither observed those purulent deposits, nor those hemorrhages, which had been observed in the epidemic of 1664, and the uterus was not found dry, hard, and tumified as in 1746. In the epidemic of 1774 the lochia flowed; this did not flow in 1746."

Pinel, Bichat, Laroche, and Gardien, found the peritoneum inflamed in so many fatal cases of puerperal fever, that they have considered it to depend essentially on peritonitis. An eminent French author who has subsequently observed the disease, and who entertains the same views of its inflammatory nature, declares that nothing can be more absurd, more chimerical, or contrary to the spirit of analysis and observation, than the idea of a puerperal fever, that is to say, a fever essential or peculiar to a woman recently delivered.

The bodies of fifty-six women were examined who had died in the General Hospital at Vienna in the autumn of 1819 of puerperal fever, and in all of these, with the exception of two cases, where delivery had taken place some time previ us to death, effusions of sero-purulent fluid were found in the abdominal cavity, and traces of inflammation in one or more of the abdominal viscera. The ovaria and Fallopian tubes were always more or less swollen, red, and tender, and the body of the uterus was always, in consequence of inflammation, flabby, tender, and easily broken down with the finger. It is also stated in the report of the epidemic, that the accession of fever is always preceded by marked changes in the whole system and particularly in the uterus, clearly indicating an inflammatory state. The symptoms were such that the inflammation combined with high fever could not be mistaken *.

If we consult the works of the most celebrated writers in this country on puerperal fever, it will clearly appear that they all describe the disease, as commencing with sense of soreness, or exquisite tenderness, in the region of the uterus, and that where it proves fatal, the appearances on dissection are those which afford the most unequivocal proofs of inflammation of the pelvic and abdominal viscera. Dr. William Hunter says " The uterus, all

* Medical Annals of the Austrian States, 1822.

the viscera, and every other part are found inflamed. There is a quantity of purulent matter in the cavity of the abdomen, and the intestines are all glued together." The account of the morbid changes of structure by Drs. Hulme, Joseph Clarke, Gordon, Campbell, Mackintosh, and others, is nearly the same, and Dr. Hamilton, who believes that puerperal fever is a fever *sui generis*, nevertheless admits that the appearances on dissection are exactly similar to the descriptions generally given by these authors, and that acute pain of the abdomen is a primary, and not a secondary symptom of the disease. Dr. H. positively affirms, that puerperal fever is a disease of a putrid or typhoid nature, requiring for its treatment, wine, volatile alkali, bark, glysters, and animal jellies; and yet in direct opposition to his theoretical views, and as if involuntarily led by the symptoms to a correct conclusion respecting the true character of the affection, he has laid down as the first indication of treatment "to moderate local inflammation by purging and hot fomentations."

Dr. John Clarke admits that in most cases of the true epidemic puerperal fever, there has been some degree of inflammation in the cavity of the abdomen, and that the uterus and ovaria sometimes partake of the inflammation. In two cases which he met with there was an appearance of pus in the veins of the uterus. The brain was always

in a natural state. In one instance only was there an appearance of disease in the chest. The effusion of sero-purulent fluid into the sac of the peritoneum, was so disproportioned however to the degree of inflammation, that he supposed it to arise from another cause than inflammation. It is now however admitted by all pathologists, that these copious effusions into the peritoneal sac, are invariably the result of acute inflammation of the peritoneum, and not of any peculiar disposition of the vessels of the part affected, as Dr. Clarke had supposed.

Dr. Gooch, the latest author of observations on puerperal fever in this country, has accurately described the symptoms and treatment of puerperal peritonitis. As a substitute for the ordinary names, child-bed fever, puerperal fever, and peritonitis, he has employed the term peritoneal fever "to express the fact that an affection of the peritoneum is an essential accompaniment of the disease, without defining what that affection is, because it is not uniform." This term peritoneal fever is perhaps the least appropriate that Dr. Gooch could have invented, for he admits that the disease may occur in its most exquisite form and yet leave few or no traces in the peritoneum after death, by which we might have been enabled to determine that this membrane had previously been the seat of the disease

"The most remarkable circumstance," Dr. Gooch observes, "which the experience of the last few years has taught us about peritoneal fevers is, that they may occur in their most malignant and fatal form, and yet leave few or no vestiges in the peritoneum after death. The state of this membrane indicated by pain and tenderness of the abdomen, with a rapid pulse, appears to be not one uniform state, but one which varies so much in different cases, that a scale might be formed of its several varieties; this scale would begin with little more than a nervous affection, often removeable by soothing remedies, and when terminating fatally, leaving no morbid appearances discoverable after death. Next above this, a state in which this nervous affection is combined with some congestion, indicated in the cases which recover, by the relief afforded by leeches, and in the cases which die, by slight redness in parts of the peritoneum, and a slight effusion of serum, sometimes colourless, sometimes stained with blood. Above this might be placed those cases, in which there are in the peritoneum, the effusions of inflammation without its redness, namely, a pale peritoneum, and no adhesions, lymph like a thin layer of soft custard, and a copious effusion of serum rendered turbid by soft lymph. Lastly, the vestiges of acute inflammation of the peritoneum, viz. redness of this membrane, adhesion of its contiguous surfaces, a

copious effusion of serum, and large masses of lymph."*

In investigating the morbid anatomy of this class of diseases, Dr. G. appears to have been satisfied with simply inspecting the serous surface of the uterus; now I am strongly inclined to believe, from what I have myself observed, and from the authorities I have quoted, that if he had gone behind the peritoneum and carefully examined the spermatic and hypogastric veins, the absorbents, the uterus and its appendages, with the sub-peritoneal tissues, he would frequently have found the products of acute inflammation. The absence of increased vascularity of the peritoneum, and of lymph and serum in its sac, does not prove, that the subjacent tissues are in a healthy state. That a nervous affection, or congestion of the peritoneum, should give rise to all the symptoms and consequences of fatal uterine inflammation, is not only highly improbable, but is wholly unsupported by proof.

Dr. Gooch affirms that symptoms and dissections cannot settle the question. " The effects of remedies on a disease," he remarks "if accurately observed, form the most important part of the history. They are like chemical tests, frequently detecting

* An Account of some of the most important Diseases peculiar to Women, by Robert Gooch, M.D

important differences in objects which previously appeared exactly similar. Symptoms and dissection," he adds, "can never do more than suggest probabilities about the nature of a disease and the effects of a remedy on it." "A trial of the remedies themselves is the only conclusive proof."

I might appeal to the works of all the eminent writers on puerperal fever, since the middle of the 17th century to prove the fallacy of this opinion, and it would be easy to shew from the contradictory statements they contain respecting the results of the various modes of treatment adopted, that we must have remained for ever ignorant of the true nature of this disease, if we had reasoned from the effects of remedies alone, without the study of symptoms, and morbid changes of structure.

That diffused pain of the abdomen with a rapid, soft pulse, not unfrequently occurs, at particular seasons, without inflammation, or with a very slight degree of inflammation, in delicate nervous women after parturition, and that these symptoms are relieved by opiates and warm fomentations, without either general or local blood-letting, will readily be admitted. That such cases are however, if not essentially different in their nature, at least widely different in degree of severity, from cases of sporadic or epidemic puerperal fever or uterine

inflammation, is clearly proved by the following observation of Dr. Gooch himself. "There seemed to be nothing dangerous in this form of disease, provided the nature of it was not mistaken, and improper remedies not used, yet it so strikingly resembled peritoneal inflammation that it was invariably taken for it by the practitioners who witnessed it." The results of the practice in the Westminster Lying-in Hospital in the years 1828 and 1829, still more decidedly prove that the cases described by Dr. Gooch were not cases of low childbed fever, for of twenty-eight women who were attacked with the disease and were treated, as he had recommended, with Dover's powder, and warm cataplasms, seven died, or one in four.

### *Treatment of uterine inflammation.*

Like inflammation of other organs of the body that of the uterus varies greatly in severity in different cases, and at different seasons. At some periods there is a marked disposition to the disease, evinced by tenderness of the uterus on pressure, and acceleration of the pulse, where inflammation is not actually developed, or where it takes place in so slight a degree as to yield readily to anodyne remedies exhibited internally, and to local applications of a soothing nature to the hypogastrium. Professor Chaussier was so convinced of the advantages and of the necessity of a continued and

gentle perspiration to prevent and to combat puerperal peritonitis, that he made every woman recently delivered take from time to time, and at intervals more or less distant, small doses of Dover's powder, and applied emollient cataplasms to the abdomen.

Where inflammation of the peritoneal covering of the uterus is fully developed, and where the disease is prevailing in an epidemic form, this treatment will prove wholly insufficient to arrest the progress of the affection, and unless blood-letting and the other means for subduing visceral inflammation be vigorously employed, it will in most cases proceed to a fatal termination.

In no inflammatory disease, are the good effects of blood-letting more strikingly observed than in the first variety of uterine inflammation, puerperal peritonitis; we do not however, as Dr. Gordon has stated, possess a remedy in it which will certainly cure the disease in all cases if early applied. Where the symptoms of peritonitis manifest themselves with great violence, twenty ounces of blood should be immediately drawn from the arm, and in a few hours, if relief is not obtained, ℥xvi more should be abstracted. The first general bleeding should be followed without loss of time by the application of leeches to the abdomen, regulating their number by the severity of the pain,

and the strength of the pulse. Warm lintseed meal poultices, or fomentations to the hypogastrium should invariably follow the application of the leeches; and five grains of calomel with an equal quantity of antimonial powder should be administered every two or three hours. After the second dose of this medicine, I have frequently exhibited a strong purgative draught, repeating it according to its effect. It will often be found, that the pain of the uterus continues with considerable severity after this treatment has been pursued; and that the most decided benefit results from combining half a grain or a grain of opium, or five grains of Dover's powder, with each dose of the calomel and antimony.

Where the symptoms do not indicate an attack of a formidable nature, we ought not to carry depletion so far. In a large proportion of cases, one bleeding will prove sufficient, and in many the application of leeches alone, with the internal remedies now mentioned, have subdued the disease.

Oil of turpentine I have seen employed in a few cases without the slightest advantage.

Emetics have been administered in puerperal peritonitis, and favourable reports have been published of their effects both by French and English authors. From the intense pain of the uterus how-

ever, aggravated by the slightest pressure of the hand, or by compression of the abdominal muscles, and from the early occurrence of nausea and vomiting in the worst cases of the disease, emetics obviously appear to be little calculated for the relief of the symptoms. The first favourable report of the effects of emetics was given by M. Doulcet, of Paris, in 1780, and it has been copied by almost all the English writers down to the present period, and has been considered as affording unequivocal proof of the power of these remedies to arrest the disease.

Doulcet commenced the employment of ipecacuan and kermes mineral in the month of June, 1782, according to Alphonse Le Roi, when the epidemic was ceasing. But these means were wholly inefficacious in the months of November and December, for the mortality was greater at this epoch, and at the beginning of the following year, than in 1780, when the remedy of Doulcet was not known; and M. Tenon affirms, that the complicated puerperal fever in 1786 was curable by no means then discovered.

With regard to the treatment of inflammation of the uterine appendages, and of the deeper seated tissues of the uterus itself, whether of the absorbents, veins, or of the muscular structure, the symptoms from the commencement are generally

those which contra-indicate the use of general blood-letting. In cases where the reaction at the invasion of the disease has been violent, with acute pain of the uterus, and venesection has been employed, the relief obtained has only been temporary, if at all experienced; and in some instances the abstraction of only a few ounces of blood from the arm has produced syncope, or been followed by rapid sinking. Where the local pain is severe, leeches and warm fomentations seem to be the appropriate remedies; but as far as my own observations go, we are in possession of no remedial means which effectually controul those varieties of inflammation of the deeper seated structures of the uterus, which I have attempted to describe. The French physicians are however of a contrary opinion, and are satisfied that we possess a powerful remedy, even in the worst cases, in mercury, employed so as to excite salivation. In one case of uterine phlebitis, I pushed this remedy by inunction to a great extent, and brought the system under the influence of mercury in less than twenty-four hours; yet the progress of the symptoms was not arrested, and the patient died, as I had observed others do where the remedy had not been administered. In other cases I have employed mercury to a great extent internally, without the slightest benefit; and it may justly be doubted from the results of M. Tonellè's practice, whether or not it possesses

the influence he supposes, for of forty-three cases where mercury was used as the chief remedy, only fourteen recovered.

I cannot conclude this subject, which is unquestionably the most important in obstetrical medicine, without pointing out the necessity which there exists for a full investigation of the means best calculated to prevent the occurrence of uterine inflammation in Lying-in Hospitals, where its dreadful fatality has been recorded by all writers since the foundation of these institutions. From the Registers of the British Lying-in Hospital, Maternité at Paris, the Dublin Lying-in Hospital, and the Tables of M. de Chateau Neuf, it is proved that the average rate of mortality greatly exceeds that of establishments where individuals are attended at their own habitations; and if it should ultimately appear, that all precautions are unavailing in diminishing the numbers attacked with the disease, it will then become a subject deserving of serious consideration, whether Lying-in Hospitals should not be considered upon the whole more injurious than beneficial to society.

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