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PATHOLOGICAL RESEARCHES
ON
INFLAMMATION
OF
THE VEINS OF THE UTERUS,
WITH
ADDITIONAL OBSERVATIONS ON
PHLEGMASIA DOLENS;

BY ROBERT LEE, M.D.

PHYSICIAN-ACCOUCHEUR TO THE BRITISH LYING-IN HOSPITAL.

FROM THE FIFTEENTH VOLUME OF THE MEDICO-CHIRURGICAL
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Read 13th and 27th October, 1829.

IN a former communication, which I had the honour of presenting to this Society, on the pathology of Phlegmasia Dolens *, I was led, from a series of facts, to infer, that inflammation of the iliac and femoral veins gives rise to all the phenomena of that disease in puerperal women. Subsequent dissections have enabled me, not only to confirm the accuracy of my former observations, but have led me to discover the important pathological fact, that in Phlegmasia Dolens, the inflammation commences in the uterine branches of the hypogastric veins, and subsequently extends from them into the iliac and femoral trunks of the affected side.

* Med.-Chir. Trans. Vol. XV. p. 132.

The object of the present communication is, to submit to the consideration of the Society the various facts which appear to establish the truth of these general views of the nature and origin of Phlegmasia Dolens; and to detail the observations I have made on inflammation of the uterine veins.

Case I.—Phlegmasia Dolens, followed by the usual symptoms of phlebitis and death. The principal abdominal veins, and those of the right inferior extremity, inflamed and obstructed.

Mrs. Edwards, æt. 35, No. 54, King Street. 16th of April, 1829, was delivered of her second child, three weeks ago, after a natural labour, and on the 9th inst. was attacked suddenly with pain in the calf of the right leg, and loss of power in the whole right inferior extremity.

On the 13th, a considerable swelling, without discolouration, had taken place from the ham to the foot, and great tenderness was experienced along the inner surface of the thigh to the groin.

The extremity is now universally swollen, painful, and deprived of all power of motion. The temperature along the inner surface of the limb is increased; the integuments are pale and glistening, and do not pit upon pressure. There is no pain in the hypogastrium, but pressure along the course of the crural vessels excites great suffering,

and the vein from the groin to the middle of the thigh is indurated, enlarged, and exquisitely sensible. There is also great sensibility in the ham, and along the inner surface of the leg to the ankle, where some branches of the superficial veins are hard and painful on pressure. Pulse 80; tongue much loaded; thirst; bowels open. There was no rigor, or symptom of pyrexia, at the invasion of the disease. She states, that the veins of the right extremity were more distended during pregnancy than those of the left.

Twelve years ago, after the birth of her first child, the patient and her relatives report, that she experienced an attack similar to the present, in the same limb, and that it remained in a weak condition for several months afterwards, but ultimately recovered its natural size and power.

18th April. The tension and increased heat along the inner surface of the limb are somewhat diminished, but the pain continues in the course of the vessels.

May 1st. Affection declining. The femoral vein cannot now be felt, but there is still a sense of tenderness in its course down the thigh. No pitting on pressure. She has suffered, during three or four days, considerable uneasiness between the umbilicus and pubis, as well as in the loins, and has had rigors, with quick pulse, loaded tongue,

and thirst. The abdomen is soft, but tender on pressure around the umbilicus.

9th. The swelling of the limb is nearly gone, as is the tenderness in the course of the femoral vessels. For several days past, she has experienced attacks of acute pain in the umbilical region, loins, and back, which have assumed a regular intermittent form. Every afternoon there has been a violent rigor, of an hour's duration, followed by increased heat and profuse perspiration. In the course of the last and preceding nights, there was slight delirium. The skin is now hot and dry; the pulse 125; the tongue brown and parched; bowels open.

The abdomen is neither tense nor swollen. On pressing around the umbilicus, she complains of a deep seated feeling of soreness. A strong vibratory motion, corresponding with the pulsations of the heart, is perceived in the epigastrium.

21st. The febrile attacks gradually declined in severity, and she appeared to recover, until yesterday, when she had a long and violent fit of cold shivering. The countenance is now expressive of great anxiety, and the pulse extremely quick and feeble. There remains no visible trace of the affection of the lower extremity.

23rd. Has been vomiting ever since yesterday,

at intervals of half an hour. Complains of great pain in the left side, increased upon taking a deep inspiration. The pulsation in the epigastrium diminished, although it is still clearly perceived: pulse 120, and soft.

24th. Symptoms continue without alleviation. Has had a severe shivering fit of long duration. Skin hot and dry; pulse 140; tongue brown and parched; diarrhœa. The pulsation in the epigastrium has entirely disappeared; the pain in the left side of the thorax is diminished; but the respiration is hurried, and there is frequent cough. Great prostration of strength. Surface of the body has assumed a peculiar sallow tinge. She has been delirious in the night, but is now perfectly conscious when roused.

The conjunctiva of the right eye has suddenly become of a deep red colour, and so much swollen, that the eyelids cannot be closed. The cornea is dull, she makes little complaint of pain of the eye, and there is no intolerance of light. The vomiting has ceased.

25th. Has again had repeated attacks of vomiting. Debility rapidly increasing; respiration hurried; incessant hacking cough; pulse 140, extremely feeble; surface of the body cold and clammy; the tongue and teeth covered with dark

sordes; diarrhœa. The left eye has also become red and swollen, without much increased sensibility.

26th. Great debility; when undisturbed she is delirious, but is conscious when roused, and complains of pain in the left side of the chest. Pulse above 140. Tongue black and dry. Conjunctiva of left eye also affected with swelling and intense redness. The cornea is dull, and shreds of lymph appear to have been effused over the left iris.

28th. Had so violent a rigor in the afternoon that the bed shook under her. She is now completely insensible. The eyes are red and swollen, and there is a copious secretion of an opake fluid from their surface and from the eye-lids, which cannot be closed. The respiration hurried. Pulse 140.

31st. Has recovered her consciousness, and drank cider and porter with great eagerness. Pulse rapid and feeble. Eyes so much swollen that they seem pushed forward from their orbits. Vision entirely lost; but hearing and the other senses remain.

2d June. Great debility. A red puffy swelling has suddenly appeared over the right elbow joint. Tongue dry and black; diarrhœa; frequent, or rather constant wandering, except when spoken

to, when she answers questions distinctly, and complains only of pain in the chest, with difficult respiration and cough.

10th. Little change has taken place in the symptoms; but she has become much weaker. The vision is lost, but the hearing is perfect, and she makes no complaint of pain in any part of the body.

15th June.—Died this morning.

Morbid appearances on examining the body of Sarah Edwards on the 16th June.—Present, Drs. Sims and Locock.

Thorax.—In its left cavity were contained upwards of two pints of a thin purulent fluid, and extensive recent adhesions existed between the pleura covering the lower margin of the superior lobe, and the pleura costalis. The surface of the inferior lobe was coated with a thick layer of flocculent coagulated lymph, as was a corresponding part of the pleura costalis. The substance of this lobe was of a dark colour approaching to black, and soft in texture, so as to be readily broken down with the fingers. In its centre about an ounce of thick cream-coloured pus was found deposited in the dark coloured and softened lung. This was not contained in any cyst or membrane, but infiltrated into the pulmonary tissue.

In the right cavity of the chest recent adhesions also existed at the inferior part. A considerable portion of the right inferior lobe was entirely changed from the healthy structure, being converted into a dense, solid, dark red coloured mass. On the anterior surface of this lobe the pleura was elevated as if by a hard irregular tumour, but when cut into, no pus escaped from this part, and it presented only the appearance of the surrounding portions of lung with a greater degree of condensation.

Vena cava inferior. Coats of the vessel considerably thickened, and the internal, where visible, of a scarlet colour; its whole cavity occupied by a coagulum, distending it to its utmost extent, and terminating in a loose pointed extremity about an inch below the entrance of the vena cava hepatica. The coagulum, covered with a membranous-like investiture of a bright red colour, throughout firmly, and in many places inseparably adherent to the inner lining of the vein; the substance within it varied in consistence and colour, in some parts it presented the appearance of coagulable lymph, in others it was a pultaceous dull yellow mass, made up apparently of pus and lymph blended together. The exterior of the firmer portions were separated into layers, which gradually disappeared as they approached the centre. The mouths of all the veins emptying themselves into the cava were sealed up, the emul-

gents excepted, the coagulum, near the entrance of these vessels, hanging loosely within the cava.

Left common iliac and its branches. Its interior plugged up with a continuation of the coagulum from the cava, and differing in no respect from it either as to consistence, colour, or the firmness of its adhesions to the inner tunic of the vein ; it was continued beyond the entrance of the internal iliac, (which it completely closed,) and terminated in a pointed extremity about the middle of the external iliac ; neither the remainder of this vessel nor the femoral vein exhibited any morbid changes. The internal iliac was much contracted and lined with a thick adventitious membrane.

Right common iliac and its branches. This vessel was contracted to more than one half its natural size ; it was firm to the touch, and of a grayish blue colour, to its internal coat adhered an adventitious membrane of the same colour, containing within it a firm coagulum, made up of thin layers of dense lymph. The internal iliac was rendered quite impervious by dense dark-coloured bluish membranes, and at its entrance into the common iliac was converted into a solid cord.

The contracted external iliac contained within it a soft yellowish coagulum, similar to the one in the cava ; its coats were three or four times their

natural thickness, and lined with dark-coloured membranous layers.

The *femoral vein*, from Poupart's ligament to the middle of the thigh, was diminished in size, and almost inseparable from the artery. Its tunics were thickened, and its interior coated with a dense membrane surrounding a solid purple coagulum strongly adherent to it. The superficial and deep femoral veins were in a similar condition, and the saphena major and minor differed from the femoral veins only in the size of the coagulum they contained, which was slender, and had formed no adhesions with the layers of lymph lining their cavity.

The cellular membrane and other textures of the limb were in a perfectly healthy condition, and in size and appearance there was externally no visible difference between the two extremities.

The morbid alterations of structure now described, can still be distinctly seen in the preparation of the diseased veins, and have been represented with great accuracy in the beautiful drawing made by Mr. Perry, from the parts immediately after their removal from the body.

Case II.—History of a patient who died of tubercular phthisis, subsequent to an attack of Phlegmasia Dolens.

Mrs. Foster, æt. 25, No. 27, Little Windmill-street, out-patient of the British Lying-In Hospital.

May 8, 1829. Previous to her confinement, six weeks ago, she had been affected for several months with pain in the chest, difficulty of respiration, cough, with copious expectoration of a matter tinged with blood, profuse perspirations in the night, and had become greatly emaciated.

During the last fourteen days, she has been suffering from attacks of pain in the bowels and diarrhœa.

On the 4th instant she experienced a sense of soreness in the left groin, which gradually extended along the inner surface of the thigh to the ham, and from thence along the posterior surface of the leg to the foot. She stated, that for two days before the occurrence of pain in the groin she had felt great uneasiness in the region of the uterus, that this suddenly quitted the hypogastrium and passed into the groin, and that from thence it extended downward along the inner surface of the thigh and leg. The limb became swollen twenty-four hours after the invasion of the pain.

The whole left inferior extremity is now affected with a hot, painful, colourless swelling, nowhere pitting on pressure, except over the foot. The

thigh is double the size of the other, and any attempt to move the limb produces excruciating pain along the inner surface of the thigh ; and the pain excited by pressure along the tract of the femoral vein is so acute that the condition of this vessel cannot be ascertained. Several branches of the saphena major above the knee are distended and hard ; pulse 120 ; respiration quick and laborious ; tongue peculiarly red and glossy ; diarrhœa continues.

10th. Pulmonary affection aggravated. The limb continues extremely painful, and is still more swollen. The groin is so tender that she cannot endure the slightest pressure over it. The same is the case with the inner surface of the thigh. The branches of the saphena vein are still hard and painful.

11th. The femoral vein, under Poupart's ligament, can now be felt indurated and enlarged, and it is exquisitely painful when pressed, as is the inner surface of the thigh, the ham, and the calf of the leg. There is comparatively little tenderness along the outer surface of the limb ; pulse 120 ; skin hot.

17th. Diarrhœa, emaciation, colliquative sweats, and difficulty of respiration increasing. The left inferior extremity is still much swollen, but there

is less pain at the groin, and in the course of the femoral vessels. The foot and ankle pit on pressure.

26th. Calf of the leg still swollen and painful.

June 19. The pulmonary affection aggravated, and she is now reduced to a state of extreme debility. The limb is still considerably swollen and is universally œdematous.

24th. Died this morning.

Dissection.—Present Dr. Sims and Mr. Prout.

Thorax. Extensive adhesions between the pleuræ on both sides. Scarcely a portion of lung could be observed which did not contain tubercles, in various stages of their growth. The right and left superior lobes contained several large tuberculous excavations.

The vena cava and right common and external iliac veins were in a sound state.

The left common external and internal iliac veins were all impervious, and had undergone various alterations of structure.

The common iliac, at its termination, was reduced to a slender tube, about a line in diameter,

which was lined with a bluish slate-coloured adventitious membrane. The remainder of the common and the external iliac veins were coated also with a dark coloured membrane, and their centre filled with a brownish ochrey-coloured tenacious substance, rather more consistent than the crassamentum of the blood.

The left hypogastric or internal iliac vein was in the same condition, but in some places reduced to a cord-like substance, and its cavity throughout completely obliterated. The branches of this vein taking their origin in the uterus, and usually termed the uterine plexus, were found completely plugged up with firm reddish coagula of lymph. From the commencement of the branches of this plexus of the hypogastric vein to the termination of this vein in the iliac, the whole had become thickened, contracted and plugged up with coagula and adventitious membranes of a dark blue colour.

The same changes had taken place in the uterine plexus and trunk of the right hypogastric vein, from the uterus to its unusual termination in the left common iliac vein.

The coats of the left femoral vein were thickened, and closely adherent to the artery and surrounding cellular substance; its whole interior lined with an adventitious membrane, and dis-

tended with a reddish coloured coagulum. The same morbid changes presented themselves in the deep and superficial branches as far as they were examined down the thigh *.

Case III.—Phlegmasia Dolens terminating fatally seven weeks after delivery. Iliac and femoral veins disorganized by inflammation.

Mrs. Mason, æt. 42, No. 3, Little Vine Street, August 29th, 1829, four weeks ago, was delivered of twins, and before the expulsion of the placenta, had nearly perished from uterine hemorrhage. Considerable tenderness of the uterus succeeded and remained until the 27th instant, when, without any apparent cause, she had a violent fit of cold shivering, followed by febrile symptoms, and pain in the right iliac region and groin.

Yesterday morning the pain increased in severity, and extended down the inner surface of the thigh towards the ham, and in the evening the whole thigh and leg was perceived to be considerably swollen.

At present the whole right inferior extremity is affected with a general intumescence, and is completely deprived of all power of motion. The temperature of the limb, particularly along the inner surface, is much higher than that of the

* See Plate VI.

other, but the integuments retain their natural colour, and do not pit on pressure. The femoral vein, for several inches under Poupart's ligament, is very distinctly felt enlarged, and is very painful when pressed. Out of the course of the crural vessels little uneasiness is produced by pressure. In the right side of the hypogastrium there is also great tenderness; pulse 120; tongue furred. She appears pale and depressed, and complains of deep seated acute pain in the lower part of the spine when she attempts to move.

August 31. The pain continues in the groin, and along the inner surface of the thigh. The glands in the groin are painful and tumid. The limb is considerably swollen, and the temperature is increased. Febrile symptoms continue.

September 8th. There is less pain in the limb, but the femoral vein can still be felt large and hard, and is painful on pressure. The foot and leg pit. She has suffered much from rigors, and has had repeated attacks of diarrhoea; pulse quick, with great prostration of strength.

14th. The limb is now œdematous, and nearly free from pain. She has complained of tenderness in the left groin and thigh, but nothing unusual can be perceived in the seat of the pain. During the last four days she has had repeated attacks of cold shivering, and has suffered severely from dia-

rrhœa, and deep seated pain in the lower part of the back ; pulse 130, and feeble ; tongue white.

From the 15th to the 22d, when she died, she was occasionally delirious, and made no complaint of pain except in the back ; pulse 140 ; tongue dry and furred. Frequent attacks of diarrhœa and severe rigors. Both inferior extremities were œdematous.

Dissection.—Present Mr. Prout.

The veins presented nearly similar appearances to those observed in the preceding cases, and the drawing and preparation will convey a more correct idea of the changes they had undergone, than any verbal description *.

The divisions of the vena cava were in this instance both affected. On the left side, the cavities of the iliac and femoral veins were filled with a dark purple coagulum, their coats being not much thicker than natural ; whilst, on the right side, the coats of these veins were dense and ligamentous, and the cavities blocked up by adventitious membranes, or lymph of a dull yellow colour.

The lower part of the vena cava, for the space of two inches, as well as the right common iliac

* See Plate VII.

was obstructed by a tough membrane of lymph surrounding a soft semifluid yellowish matter.

The right common, external, and internal iliac veins were imbedded in a mass of suppurating glands, the purulent fluid of which had escaped into the adjacent cellular membrane, and forced its way downwards in the course of the psoas muscle, as low as Poupart's ligament.

The right hypogastric vein was reduced to a small impervious cord, and its branches distended with coagula of lymph of a bright red colour.

The right femoral and its branches were in like manner impervious, their coats being greatly thickened, and their interior occupied by coagula.

The cavities of the left common external iliac and hypogastric veins contained soft coagula, disposed in layers, which adhered to the inner tunic of the vessel.

The trunk of the left hypogastric vein was contracted, its coats somewhat thickened, as well as its branches filled with red coloured, worm-like coagula. The spermatic veins were healthy.

The lower extremities were both infiltrated with serum.

Cases IV, V, and VI.—Inflammation of the iliac and femoral veins after parturition, which exhibited the characteristic symptoms of the milder forms of Phlegmasia Dolens.

May 9th, 1829. A young woman, residing in King-street, St. Anne's, had a severe attack of uterine inflammation a few days after delivery, which took place three weeks ago. She seemed to recover in a favourable manner, until the 6th inst., when she suddenly experienced a sense of acute pain in the calf of the left leg, which was soon followed by increased heat and swelling of the part.

There is now considerable tumefaction of the whole left inferior extremity, the integuments are hot, and along the tibia there is pitting on firm pressure. There is great tenderness to the touch in the calf of the leg, the ham, and along the inner surface of the thigh to the groin, in the course of the femoral vessels. The inguinal glands are enlarged and painful, and the femoral vein under Poupart's ligament is felt considerably indurated. Above Poupart's ligament, in the direction of the brim of the pelvis, there is increased sensibility on pressure. Slight constitutional disturbance.

August 29th. The swelling of the extremity has disappeared, but the limb still remains stiff and feeble. During the last fourteen days, the swell-

ing of the inguinal glands, which had never completely subsided, has increased, and they are now in a state of suppuration.

Mrs. Masters, æt. 31, Caroline-street, Great Russel-street, was delivered by instrumental aid of a still-born child, on the 1st July, 1829. On the 7th, she had rigors, and a sense of tenderness in the hypogastrium and left groin. In the course of the three following days, the pain extended gradually along the inner surface of the thigh to the ham and leg, and a general intumescence of the limb took place.

July 11th. The left lower extremity is hot, swollen, but not discoloured. Increased sensibility in the course of the femoral vessels; but the vein cannot be distinctly perceived, though its course is exquisitely painful when pressed. There is no fulness or tenderness in the region of the uterus; but she complains much of a painful sense of throbbing in the lower part of the abdomen. Countenance pale and depressed; pulse 120; sickness and vomiting; tongue furred.

13th. The femoral vein can now be felt, large and hard; the thigh is greatly swollen; constitutional symptoms continue.

August 31st. The extremity is still swollen,

painful, and feeble ; vein cannot be felt. Health restored.

Dr. Sims saw this patient with me during the acute stage of the complaint.

A young woman, a patient under the care of my friend, Dr. Forbes, at the Surrey Dispensary, was attacked, on the fifth day after delivery, with acute pain in the region of the uterus, rigors, and suppression of the lochia. On the 7th, the pain extended into the left groin and upper part of the thigh, and a considerable swelling took place in the calf of the leg.

On the thirteenth day subsequent to delivery, (October 5th, 1829,) the limb was swollen to nearly double the size of the other ; the integuments were hot, but of a pale shining colour, and along the tibia and upper surface of the foot they pitted upon pressure. Great pain was experienced on pressing the inner surface of the thigh, ham, and calf of the leg ; while no complaint was made of the strongest pressure along the outer surface of the limb. The femoral vein, for a space of three or four inches under Poupart's ligaments, was painful when pressed, and felt like a hard cord. The branches of the saphena were distended, but not painful. Pulse 120 ; great prostration of strength.

A similar affection took place, a few days after, in the right inferior extremity, and the femoral vein was also distinctly felt enlarged.

Note.—November 1st. She is reported to be gradually recovering, though the limbs are still swollen and painful.

In the case of Mrs. Edwards, the first of the fatal cases now related, there succeeded, after a short interval, to the usual symptoms of Phlegmasia Dolens, those which characterize phlebitis in its severest forms; viz.—rigors, prostration of strength, rapid feeble pulse, low wandering delirium, attacks of vomiting and diarrhœa, with brown parched tongue, and ultimately rapid and destructive inflammation of the eyes, and purulent deposits in the substance of the lungs.

The morbid appearances which were observed in the veins also demonstrate, that the alterations in the structure of that system of vessels were produced by inflammation, and, further, that the right iliac veins were affected at a much earlier period than the vena cava and those of the left side. The veins of the right side were partially obliterated, and the principal changes they had undergone appeared to be of long standing, and to be perfectly distinct, in respect to the period when they had taken place, from those observed

in the other veins, and to be referrible to the effects of the first attack of Phlegmasia Dolens.

Though the branches of the hypogastric veins were not traced to the uterus, from the unfavourable circumstances in which the dissection was made, and although no sign of recent disease could be perceived in the tissues of this organ, yet, from the complete obliteration of the trunks of the hypogastric veins, and the contracted and reduced state of their coats, it may be reasonably supposed, that their branches were similarly affected, and that the disease originated in them.

The history of the second and third cases now related, and the morbid alterations of structure in the iliac, femoral, and hypogastric veins, demonstrate that these changes were the result of inflammation, which inflammation had commenced in the uterine branches of the hypogastric veins, and extended along their internal membrane, to the great venous trunks of the pelvis and inferior extremities.

Although these are the only cases of Phlegmasia Dolens, wherein the affection of the iliac and femoral veins has been distinctly traced to the venous system of the uterus, yet they would perhaps of themselves warrant me in drawing the inference, that the disease generally commences in the uterine veins, and that it is not a mere local affection of the limb. This general conclusion

will, however, derive strong additional support from the following facts, which I adduce from the works of different authors.

A case of obliteration of the vena cava and its principal branches after parturition, has been recorded by Mr. Wilson, where the inflammation which had produced the morbid appearances must have originated in the uterine veins. "The coats of the emulgent veins and of their branches, were thickened, and their cavities filled with coagulable lymph. Both the spermatic veins were remarkably thickened, and their cavities completely obliterated, as were the primary iliac veins, until they had nearly reached the groin and the internal iliac veins with most of their branches, particularly those which returned the blood from the uterus.

"The uterus was much larger than usual, the coats of its principal veins were thickened, and their cavities partially obliterated. The small branches, both in its substance and in its internal surface, were very numerous and much distended with blood. The vessels of the lower extremities were in a perfectly healthy condition; no accumulation of the blood had taken place in the veins, nor had any watery fluid collected in the cellular membrane."

The anastomosing branches of the veins on the sides and back part of the pelvis were much en-

larged, as were also those between the vena saphena major and the branches accompanying the deep seated arteries, passing through the foramen magnum ischii and the sciatic notch; large communications existed between the venæ pudicæ externæ and the lower branches of the inferior mesenteric vein, which was enlarged to treble its natural size. The veins coming from the sinuses of the dura mater, in the vertebral theca, the sinuses themselves, and the veins entering them, were much enlarged, and the communications between them and the sacral and lumbar veins were, by the blood contained in them, rendered very apparent. The lumbar veins anastomosed with the vena azygos, which was three times its natural size. The blood, which entered the mesenteric vein, passed from thence to the vena portæ; it circulated afterwards through the liver, and passed through the small portion of the vena cava which remained previous to the right auricle.

Two other cases of a similar description are mentioned by Mr. Wilson, in both of which the veins of the uterus contained pus*.

As none of the symptoms of Phlegmasia Dolens were present in either of these cases, and as neither pain nor swelling occurred in the left inferior extremity of the patient whose case I first detailed,

* Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge. Vol. III.

though the common and internal iliac veins were both completely impervious, it would seem to follow, that it is essentially requisite to the production of the disease that the inflammation should extend from the iliac into the principal veins of the extremity. In all the examples of Phlegmasia Dolens which have come under my observation, this extension of the inflammation has been distinctly marked by increased sensibility, and by a hard and distended state of the femoral vein, from Poupart's ligament to some distance along the inner portion of the thigh.

Though the condition of the uterine veins in the following case, related by Meckel, is not described, it is more than probable, that the morbid appearances observed in the crural veins originated in those of the uterus. "A short time after parturition, a woman was attacked with fever, pain of the abdomen and pelvis, which soon disappeared, but returned in three weeks, and were accompanied with expectoration and pain in the region of the liver and left haunch. The left thigh also became affected with excruciating pain. On examining the body after death, the abdominal cavity was found to be filled with pus, the liver much enlarged, but the lungs healthy. The crural vessels and nerves were surrounded with a puriform matter. The crural vein was filled with pus and blood, and its coats indurated. Its internal membrane was more spongy than usual, and covered

with a very distinct false membrane, which peeled off in flakes." *

M. Bouillaud describes the coats of the left iliac and hypogastric veins, in his second case, as thickened, and their exterior layers disorganized, ("comme disorganisées et lardacées.") †

In Mr. Lawrence's account of the morbid changes observed in the first case related by Dr. Davis, no particular mention is made of the condition of the hypogastric veins, nor does it appear that the course of these vessels was traced to their termination in the iliacs. Mr. Lawrence, indeed, observes, that the uterus, and its appendages and blood-vessels, were healthy. To express a doubt of the accuracy of so distinguished an anatomist may be considered presumptuous; yet, from my own experience in the investigation of the diseases of the uterus, I may, perhaps, be allowed to say, that unless the attention had been directed in a particular manner to the vessels of this organ, their morbid state might easily have escaped detection.

The condition of these vessels in Dr. Davis's second and third cases is likewise unnoticed, but in the fourth, it is stated, "that the left internal

* Sasse de Vascor. Sanguif. inflamm. Dissect. Halæ, 1797.

† Archiv, Gener. de Médecine. Tom. II. p. 192.

iliac was greatly inflamed, and its diameter so much contracted by the morbid thickening of its parietes, that it was rendered almost impervious. On making an incision into the left external iliac, it was found to contain a coagulum of blood of firm consistence, but not at that part adherent to the internal surface of the vein. Upon examining, however, the common iliac portion of the vessel, adhesion of the same column of coagulum had obviously taken place.”*

From what is now known respecting the progressive changes uniformly witnessed in cases of phlebitis, these appearances of the iliac veins demonstrate, that the inflammation did not commence, as Dr. Davis has supposed, in the external or common iliac, but that it originated in the left hypogastric vein.

In the first example of Phlegmasia Dolens published by M. Velpeau, not only were the coats of the principal veins of the affected extremity of a red colour, and thickened, but all the branches which form the hypogastric vein were filled with an adherent concrete purulent matter.

The appearances in the second case are thus described :—“ The peritoneal coat of the uterus was inflamed, and several purulent deposits found

* Medico-Chirur. Transact. Vol. XII.

in the substance of this organ. The veins of the uterus contained pus, where the placenta had been attached; on the left side, most of these veins were filled with pus, and the branches which formed the hypogastric, and which came from the groin and vulva, contained the same matter, mixed with a dark coloured grumous blood. The right inferior extremity was slightly swollen, the left greatly so. Large abscesses were found in the cellular substance between the muscles, pus was also found in the deep veins, in the femoral, iliac, and vena cava, and right auricle.” *

Dr. Gooch had an opportunity in 1823 of examining the uterus of a patient who had died of Phlegmasia Dolens, and he found the uterine sinuses severely inflamed, several of them being plugged up with lymph, and their inner surface coated with a membrane of a red mulberry colour. The state of the hypogastric and iliac veins was not ascertained. This fact was communicated to me by Dr. Locock, at the period it was observed.

None of the eminent authors who have now been quoted have made any allusion to Phlegmasia Dolens commencing in the uterine veins; and M. Velpeau, the latest continental writer on this subject, has given it as his opinion, that the affection of the veins is not the primitive disease, but

* Archiv. Gener. de Médecine. Tom. VI. p. 221.

is the consequence of the inflammation and sup-
puration of the articulations of the pelvis, with
which he observed it to be occasionally combined.
His words are "je crois n'avancer qu' une conse-
quence assez naturellement tirée des faits, en disant
qu' ici le principe du mal etait dans les articula-
tions ; que c'est de la qu'il est parti, et que le reste
ne doit être regardé que comme dependante ou
consecutif." *

The puriform fluid found within the veins, he
supposes to have been introduced into their cavity
by absorption, and not to have been the effect of
inflammation, nor the cause of those affections of
the articulations, as is now known to be the case.

It is due to Mr. Guthrie to mention, that in a
paper *On Inflammation of Veins after Amputation*,
published in the Medical and Physical Journal for
1826, he suggested the importance of tracing the
veins from the common iliac of the affected side
down to the uterus, and expressed a suspicion
that the disease would be found to originate in
that organ.

All the different authors who have treated of
Phlegmasia Dolens describe it as commencing, in
the great majority of cases, subsequent to the 10th
day after parturition, with symptoms of uterine
irritation, and constitutional disturbance of a low

* Archiv. Gener. de Médecine. Tom. VI.

nervous character, and with pain and swelling in one extremity only. They have assigned various reasons for these remarkable peculiarities in the period and mode of development of the disease, as pressure of the gravid uterus on the iliac veins during gestation, the change in the distribution of the blood from the sudden removal of this pressure, exposure of the extremity to cold, suppression of the lochial discharge, &c., all of which however, taken singly, or combined, are insufficient to account for the phenomena; and the occurrence of the disease after menstruation and abortion proves that these causes are not necessary for its production. The facts which have now been stated afford a more satisfactory explanation of these phenomena, and shew, that if inflammation be excited in the orifices of the uterine veins, it may spread along these to the iliac and femoral veins, and by the morbid changes induced in them, give rise to all the subsequent symptoms.

The mode of development and extension of the inflammation from the uterine to the iliac and femoral veins of the affected extremity, will be best understood by a concise statement of the principal facts relating to uterine phlebitis, of which Phlegmasia Dolens must now be considered as merely one of the remote consequences.

When the contents of the gravid uterus have been expelled in parturition, the orifices of the

uterine veins, where the placenta had been attached, are left open, and a communication is indirectly established between the venous system, and the atmospheric air, in a manner somewhat analogous to what takes place in amputation, and other extensive wounds. Such a condition of the uterine veins, in consequence of the separation of the placenta, must be favourable to the production of inflammation; and inflammation once excited is seldom limited to their orifices, but extends with greater or less rapidity 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 effects of inflammation in the uterine veins are the formation of adventitious membranes on their inner surface, and the deposition of coagula of lymph or of purulent matter within their cavities.

Coagula of the fibrine of the blood, which often extend a considerable distance into the uterine veins, are formed in their orifices after every labour, and are the principal means employed by nature for the permanent suppression of uterine hemorrhage. These may be distinctly perceived for a long period after delivery, and they have a form and colour different from the coagula produced by inflammation. In opening the body of a patient four weeks after confinement, I observed

distinct traces of these, partially absorbed coagula in the muscular substance of the uterus, at the part where the placenta had adhered.

The inflammation may be limited to the veins, but not unfrequently the muscular tissue of the uterus contiguous to them participates in the inflammation, and becomes of a dark red or blackish brown colour, and so soft in its consistence as to be readily torn with the fingers. The peritoneal covering may be also affected, and the usual consequences of puerperal peritonitis will then ensue.

The veins which return the blood from the uterus, and its appendages 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.

But inflammation having once begun, it is liable, as I have before stated, to spread continuously to the veins of the whole uterine system, to those of the ovaria, of the Fallopian tubes and broad ligaments. The vena cava itself does not always escape, the inflammation spreading to it from the iliac or from the spermatic veins. This occurrence seldom takes place to a great extent through the medium of the spermatic, the inflammation usually terminating abruptly at the opening of the spermatic into it on the right side, or of the renal on the left. If it pursue, as it sometimes does, the direction of the kidneys, the substance of these organs, as well as their veins, may be involved in the disease.

Uterine phlebitis appears to result from the mechanical injury inflicted by protracted labour, from the force required for the extraction of the placenta in uterine hemorrhage, from retained portions of placenta undergoing decomposition in the uterus, the application of cold and probably

of contagion, and from various unknown causes operating on the uterine system after delivery.

It is perhaps impossible to determine for the most part, the precise period of its invasion, from the total absence of local pain, and of other symptoms; but it is probable that it most frequently begins soon after delivery, and remains stationary for a time around the orifices of the uterine veins, as phlebitis has been observed to do, where it occurs after venesection. Of this, however, we can have no certain proof, nor can it be admitted to be a general occurrence, from the rapidity with which the inflammation has been found to attack the uterine, spermatic, and renal veins. In one case the disease proved fatal on the evening of the fifth day after labour, and on dissection, all these veins were found disorganized.

It may be stated, as the general result of all the observations hitherto made on uterine phlebitis, that it occurs most frequently from the 10th to the 20th day after parturition, though it has been observed to commence at an earlier, as well as at a much later period.

Where the veins alone are inflamed, the peritoneal and muscular tissues remaining unaffected, there is often either no pain or only a dull pain, with a sense of weight in the region of the uterus, and no other local symptom by which the disease

can be recognized. The uterus too may return to its usual reduced volume or nearly so, and it is only on the accession of the constitutional symptoms, which have been already detailed, that the existence of this insidious and dangerous affection can be determined. If the substance of the uterus be affected, this organ remains above the brim of the pelvis, large, hard, and painful on pressure, as in puerperal peritonitis.

With regard to the lochial discharge, it has sometimes been observed to be foetid, and puriform, and at other times in a perfectly natural state.

The constitutional symptoms of uterine phlebitis, and the important alterations which take place in the structure of the brain, lungs, and other internal organs, and also in the synovial, serous, and cellular membranes, are often so peculiar and characteristic, that it is the more remarkable this disease should have been so long overlooked by pathological enquirers. Mr. Wilson and Dr. Clarke, it is true, many years ago, observed pus in the veins of the uterus, and the same fact was repeatedly stated by others, but they pointed out merely the lesion of the uterine veins, without having observed the important constitutional effects to which the disease gives rise. In the cases which came under my observation in 1827 and 1828, and the histories of some of which were

read by Mr. Arnott, before this Society, last season, some of the more remarkable of these general effects were distinctly stated, and many others have, since that time, been pointed out by Messrs. Dance* and Cruveilhier†.

Recent experience has induced me to believe 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.

Inflammation of the uterus and its appendages may be considered as essentially the cause of all the destructive febrile affections, which follow parturition; and the various forms they assume, inflammatory, congestive, or typhoid, will probably, in a great measure, be found to depend on the serous, muscular, or venous tissue of the organ having become affected.

In order, still further to illustrate the observations which have now been made on uterine phlebitis, I subjoin an account of several examples of the disease which have come under my own ob-

* *Archiv. General. de Médecine.* Tom. XIV.

† *Anatomie Pathologique*, 4^{tième} Livraison, par M. Cruveilhier, 4^{to}. Paris, 1829.

servation, and in which some striking peculiarities occurred.

Case VII.—Inflammation of the uterine and right spermatic veins, after parturition, with gangrenous inflammation of the lungs and pneumothorax of the right side.

Mrs. Keene, æt. 31, No. 6, Draper's Place, Euston Square.

After a protracted labour of three days, was delivered on the 14th of July, 1829, by artificial aid, of a still-born hydrocephalic child.

Immediately after the expulsion of the child, she was seized with a fit of the most intense shivering, which continued upwards of an hour, notwithstanding the exhibition of the most powerful stimuli, and the exhaustion which followed was so alarming that her life was despaired of. She rallied, however, and passed a quiet night.

On the following and two or three subsequent days, the shivering fits returned at irregular periods, sometimes in a slight form, at others, in that of a severe rigor, followed by a flush of heat, and partial or general perspiration. During this time, the effects consequent to parturition proceeded as usual. The uterus slightly painful on pressure; lochia natural; bowels open; pulse from

133 to 140, and extremely feeble. No complaint of uneasiness, with the exception of a troublesome cough, and hoarseness, with which she has been afflicted during the latter months of pregnancy.

On the 4th day from delivery the secretion of milk appeared, for a short period, and afterwards receded. From this day to the 10th, the following were the symptoms: pulse rapid; skin universally of a dusky yellow colour, and the heat of surface increased; respiration hurried; thirst; tongue dry, but not furred; great prostration of strength; sallow and haggard countenance; restless and sleepless nights; mental faculties undisturbed. The uterus had gradually subsided, and no pressure, however great, either on it, or on the parts in its vicinity, caused pain, except in the right iliac region, where some uneasiness was felt; the flow of lochia natural; bowels regular.

At this period the hacking cough which had so long troubled her, became more frequent, and it was with difficulty she expectorated the ropy mucus which followed it, and which in the day amounted to an ounce.

From the 11th day the respiration became more short and hurried; the pulse more rapid; occasional flushes of heat; thirst; extreme debility; diarrhoea. Pressure over the whole abdomen gave no uneasiness, nor was pain felt in any part of the

chest, though auscultation plainly indicated the existence of disease, particularly on the right side. The patient made no complaint but of weakness and of the cough.

On the 12th, the dyspnœa increased, and she sunk exhausted in the evening.

My friend, Mr. Prout, of Welbeck Street, who had carefully observed the progress of the symptoms, from the period of delivery, was present with me when I opened the body.

Sectio Cadaveris. The uterus was of the size it usually is about the second week after delivery, and exhibited externally no vestige of disease. On laying it open, its internal surface, as well as its muscular tissue, appeared also healthy, and the veins being traced, the right spermatic alone was found greatly enlarged and indurated.

The uterus being removed from the body, for more minute examination, an incision was made into the right superior angle, to which the placenta had been attached, and here its veins were discovered to be empty, and their internal surface of a scarlet colour. On tracing them towards the trunk of the right spermatic vein, they were found to contain a sanious purulent fluid, and were contracted in their diameters, and coated with false membranes. The veins of the right ovarium and

Fallopian tube were all plugged up with firm coagula. The spermatic itself was lined throughout its whole extent with dense membranes of a reddish or of an ash grey colour. Its coats, independent of these membranes, were of extraordinary thickness and firmness, and more like those of a large artery than of a vein. Its whole cavity was contracted ; in some parts occupied by a dark coloured fluid, in others, quite obliterated by adhesions, formed between the surfaces of the membranous layers deposited within it. At the termination of the spermatic in the vena cava, its orifice was scarcely large enough to admit a crow quill ; traces of inflammation extended beyond this orifice, the vena cava being partially lined from two to three inches above it, with an adventitious membrane, strongly adherent to its coats, which were at this part double their natural thickness. In its passage, upwards, the inflammation had extended a short distance into the right emulgent vein, which, near its orifice, was coated with a pellicle of lymph.

On opening the thorax, a stream of air escaped from the right side ; the lungs were collapsed, and upwards of two pints and a half of a red coloured serum were found in the sac of the pleura. The right inferior lobe was coated with lymph, and a portion of the pleura on the anterior surface was destroyed, and a black gangrenous slough exposed in the substance of the lung. The pul-

monary texture around was condensed, and of a deep violet or livid colour.

The left inferior lobe was also partially coated with a thin layer of lymph, and the pleura at one point on the anterior surface was elevated as if by a small hard globular body underneath it. When this was laid open, it appeared to consist of a thick yellowish coloured cyst or capsule, containing a soft black matter like a gangrenous eschar. The substance of the lungs around was unusually dense, and of a dark livid colour.

The appearances of the portions of lung affected with gangrene, and of the right spermatic vein and vena cava now described, are well preserved in the preparations of the parts.

A case of inflammation and suppuration of the left spermatic vein, with gangrene of the lung, after parturition, came under my observation in July, 1828, in the St. James's Infirmary, and it will be found to bear a striking resemblance to the instance I have now related. The history of this interesting case has been recorded by Mr. Arnott*.

Case VIII.—History of a case of inflammation of the spermatic vein and sinuses of the uterus †.

* Medico-Chir. Transact. Vol. XV. p. 102.

† London Medical Gazette, Vol. III. p. 409.

September 21st, 1827. Mrs. Somerville, æt. 40, was delivered of her seventh child on the 18th instant, after a natural labour. Yesterday afternoon she was attacked with a severe rigor, which was speedily followed by acute pain in the hypogastrium and loins, suppression of the lochia, nausea, urgent thirst, and increased heat of skin. In the evening she was delirious and slightly comatose. She is now roused with difficulty, and makes no complaint, but of pain in the left iliac region. The abdomen is unusually distended, but neither hard nor tense; and pressure produces no uneasiness, except between the left ilium and umbilicus. The uterus can still be felt above the brim of the pelvis, large and hard, and very painful on pressure. The milk and lochial discharge are suppressed. The countenance is pale and anxious; respiration hurried; pulse 130, weak and intermitting; tongue white and moist; bowels have been opened by castor oil.

During the 22nd, the stupor continued to increase, the abdomen was much more distended and painful, the respiration more hurried and laborious, and the pulse extremely quick, feeble, and intermitting. She became completely comatose in the evening, and died on the morning of the 23d.

Dissection.—Present, Dr. Auchinleck and Mr. Wade.

The intestines were slightly distended with gas, but there was no trace of inflammation on any part of their peritoneal surface, and no fluid effused into the sac of the peritoneum. On turning aside the intestines, the left spermatic vein, from the uterus to its junction with the left emulgent vein, was seen distended to nearly the size of the vena cava itself. The cellular membrane surrounding it was highly vascular, and adhered closely to its external coat. On laying open the vein, a dark-coloured firm coagulum of blood filled it throughout its whole course, but it did not adhere to its internal surface, except near its termination, where it was lined with a layer of lymph. The coats of the vein were thicker and firmer than usual, and the internal membrane was of a bright scarlet colour, as was that lining the veins of the uterus near the fundus on the left side, the part to which the placenta had been attached. The substance of the uterus in this situation was of a dark livid colour, remarkably soft in its texture, and easily torn with the fingers. The corresponding ovary and Fallopian tube were also very soft and of a dark red colour, and shreds of coagulable lymph adhered loosely to their surface. The left renal vein was in the same state as the spermatic, and the substance of the left kidney was soft and vascular. In other respects, the abdominal viscera were in a healthy state, and nothing unusual was perceived in those of the thorax. The brain was not examined.

The preceding case, with four others of a similarly malignant character, came under my observation in the last two weeks of September, 1827. As all the individuals so attacked had been attended during labour by the same midwife, and as no example of a febrile or inflammatory complaint of a serious nature occurred among the other patients of the extensive Institution under my charge, during the period above mentioned, I was led to conclude, that the disease was propagated by contagion.

Case IX.—Uterine phlebitis fatal on the third day after delivery.

On the 14th September, 1829, I was called to a patient, residing at 7, Little Denmark-street, and was informed by the midwife in attendance, that labour had commenced on the morning of the 12th. The external parts being enormously swollen, the abdomen tender, and the strength completely exhausted, delivery was accomplished by embryotomy. During the 15th, she made no complaint; but on the morning of the 16th, she had a violent rigor, followed by acute pain in the region of the uterus, rapid feeble pulse, and distressing sickness. Sixteen ounces of blood were removed from the arm, which induced faintness, without remission of the pain. Twenty-four leeches were applied to the hypogastrium, and calomel

and antimonial powder administered every three hours.

16th. Delirium in the night. Countenance haggard; pulse 140, and feeble; excessive pain of abdomen, with much tension; incessant vomiting of a dark coloured matter. She sunk on the morning of the 17th.

Dissection.—Both Fallopian tubes were of a dark red colour, and contained pus. The ovaria were much larger and softer than natural, and covered with a thick layer of lymph. The peritoneum covering the posterior part of the uterus was red, but no lymph was effused over its surface, and the intestines, though much distended with gas, presented no trace of inflammation. Twelve ounces of a red serous fluid were effused into the abdominal cavity. The uterus being removed and carefully examined, the greater part of its veins on the left side, where the placenta had been attached, were found gorged with pus. The spermatic and hypogastric veins, at a short distance from the uterus, were healthy, as was the muscular coat of the uterus on the left side.

Case X.—*Uterine phlebitis, with ulceration of the articular cartilages, and purulent effusion within the capsular ligament of the right knee-joint.*

Mrs. Mayhew, æt. 33, was delivered in the British Lying-in Hospital, on the 2d March, 1829, after an easy and natural labour. The placenta was expelled in a few minutes after the infant, and she appeared to recover in a favourable manner, until the third day, when a discharge of blood from the uterus took place.

From the 6th to the 20th of March, she made no complaint of uneasiness in any region of the body, though the strength rapidly declined. The countenance was of a dusky yellow hue; the heat of the surface slightly increased; the respiration hurried, particularly on bodily exertion, and the pulse was above 130, and feeble; the tongue pale and glossy, with total loss of appetite, though at no period was there nausea or vomiting. The uterus gradually receded into the pelvis, and pressure over the hypogastrium produced no sensible uneasiness. The milk was secreted sparingly. The lochial discharge had a peculiarly offensive smell.

From the 20th to the 28th, when she died, the prostration of strength increased, and the pulse became still more frequent and feeble; the respiration was extremely hurried; and she was incessantly harassed with a hacking cough and the expectoration of a frothy mucus. The abdomen continued soft and flaccid, and not affected by pressure. She, however, during this period, com-

plained of excruciating pains in all the joints of the right superior extremity, and in the right knee-joint, which was observed to be considerably swollen, but not discoloured.

Dissection.—The uterus was found reduced to its usual size a month after delivery, and no morbid appearance was visible on its peritoneal surface, except a slight adhesion between its left margin, near the entrance of the Fallopian tube and the rectum. The uterus being removed from the body, and the cavity laid open, there was found to be a portion of placenta, about the size of a nutmeg, in a putrid state, adhering to its inner surface at the part corresponding with the adhesion between the peritoneal coat and rectum. The substance of the uterus, to the extent of an inch around this, was of a peculiarly dark colour, almost black, and as soft as sponge. On cutting into it, about a tea-spoonful of purulent matter escaped from the veins, and a small additional quantity was pressed out from them. The spermatic and other abdominal veins presented no morbid appearance, and the uterine appendages were healthy.

On opening the capsular ligament of the right knee-joint, where a fluctuation was perceived, about six ounces of thin purulent fluid escaped, and the cartilages of the femur and tibia were extensively eroded. There was no appearance of in-

flammation, however, exterior to the capsular ligament. The right wrist was swollen, but the structure of the joint was not affected. The cellular membrane around it was unusually vascular, and infiltrated with serum.

The patient, whose case I have now related, was under the immediate care of my friend and colleague Dr. Henry Davies, who was present at the dissection, and also Mr. Armstrong of Golden Square *.

The preceding case, and others of a similar description, to which Mr. Arnott and M. Dance have alluded in their valuable essays, induced me to believe, that the violent and destructive affections of the joints, which sometimes occur in puerperal women, were invariably connected with inflammation of the uterine veins; but in the following fatal cases, though these vessels were minutely examined, no morbid alteration of structure in their coats could be detected †.

* See London Med. Gazette. Vol. III. April 25, 1829.

† Dr. Denman had noticed these affections of the joints in puerperal women, for he observes, "There is a peculiarity in this fever, which I believe has not hitherto been observed or mentioned. It is an erysipelatose tumour of a dusky red colour, on the knuckles, wrists, elbows, knees, or ancles, about the size of a shilling, and sometimes larger. This is almost universally a mortal sign, and on the inspection of those who have died with this appearance, the disease has been found to

Case XI.—Gangrenous inflammation of the muscular tissue of the uterus after parturition.

Mrs. Clarke, æt. 35, No. 57, Monmouth Street. On the 12th Sept. 1829 (the seventh day after parturition) she had a severe febrile attack, with intense pain across the forehead, redness of the eyes, increased sensibility to light, and distressing sickness at stomach. The respiration was hurried; the pulse 150 and feeble, and the skin hot. No tenderness in the region of the uterus.

On the 13th these symptoms continued without any remission; and a soft puffy swelling, about the size of a hen's egg, suddenly appeared over the back of the left hand, close to the wrist.

Until the 17th it gradually enlarged, and was accompanied with considerable swelling of the forearm, and the most excruciating pain. A deep incision was made by Mr. Copland Hutchison into the swelling, and an ounce of pus was discharged.

18th Sept. She has been violently delirious in the night; but though now more tranquil, is still incoherent. The countenance is sunk; pulse 150 and feeble; tongue dry and brown; bowels open. There is now considerable tenderness on pressure have affected principally the uterus or its appendages."—Introduction to Midwifery. P. 570.

of the hypogastrium. An offensive discharge has taken place from the vagina. The swelling in the left hand and forearm is a little diminished.

From the 19th to the 22d, when she died, there was delirium, with repeated severe fits of cold shivering. Pulse 150; tongue dry and brown. The left forearm continued swollen, and of a dusky red colour. The integuments on the back part of the hand were completely destroyed by sloughing, and the extensor tendons laid bare.

Dissection.—The uterus had entirely receded into the pelvis. The peritoneum covering its fundus, and the posterior part of the body, was of a yellowish colour, and so soft as to be torn with the fingers in the removal of the parts from the body. The muscular and internal coats of the uterus, particularly at the superior and posterior parts, were disorganized, being reduced to a soft pulp of a dark red and ash grey colour. The appendages of the uterus and blood-vessels exhibited no trace of disease *.

The cellular membrane of the left forearm was

* The softening of the muscular tissue of the uterus, observed in this case and in Cases VIII. and X., would appear to have resulted from a species of gangrenous inflammation of the part. This malignant form of uterine inflammation has been noticed by Pouteau, Gastellier, Ristelhueber, and Boer, and still more recently by Messrs. Luroth and Danyau, the latter of whom has described eight cases of this dangerous affection

loaded with pus; that over the left wrist and back of the hand was reduced to the state of a dark coloured slough.

Case XII.—Severe affection of the joints after parturition.*

Mrs. Pope, æt. 40, No. 7, Feathers Court, Drury-lane. She was delivered on the 26th Oct. 1827 of her fourteenth child, after an easy labour, and appeared to recover favourably until the 3d of November. Without any obvious cause, she was then suddenly attacked with a severe rigor, which was speedily followed by intense headache, vomiting, general soreness of abdomen, and suppression of the lochia.

Nov. 6th, 1827, (eleventh day after parturition). The symptoms now observed are, great prostration of strength, laborious respiration, with pain at the bottom of the sternum, and frequent hacking cough; pulse 135, and extremely feeble; skin hot and dry; the lips parched; and teeth covered with brown sordes; tongue of a deep red at the edges, dry, chapped, and covered with a yellow furr in the centre. Occasional retching and vomiting; bowels confined; lochia suppressed. The

which he witnessed in the Maternité at Paris in the present year.—*Essai sur la Metrite Gangreneuse*, par A. C. Danyau. Paris, 1829.

* London Med. Gazette. Vol. III. P. 665.

abdomen is perfectly soft and natural, but feels generally sore on being pressed. She complains of acute lancinating pain in the vertex, and of pain and loss of power to move the left inferior extremity.

On examining the limb, there are several hard lumpy cords found running up on the inside of the thigh, in the direction of the superficial veins, which are very painful to the touch. The integuments over these are not discoloured.

The middle finger of the left hand is also exquisitely painful, and on examination, is perceived to be much swollen around the second joint, where the integuments are of a dusky red colour.

7th. She has been delirious in the night, and is now incoherent, with a peculiar wildness of expression in the countenance. The general debility has greatly increased; the respiration is still more hurried; and the pulse is 140, soft and compressible; the tongue is brown and dry; the muscles of the face and extremities are affected with tremors; the whole surface of the body is covered with a yellow suffusion.

8th. She is in all respects worse; there has been violent delirium during the night; and she is now roused with difficulty. The respiration is still

more oppressed, and the pulse so rapid and feeble as not to be counted. The countenance dejected and deeply suffused, as is the whole surface of the body. The swelling in the joint of the finger has increased, and another painful diffused swelling along the forearm has occurred in the night, with slight discoloration. The whole of the right superior extremity has also become stiff, and so painful, that attempts to move it produce violent pain. The swelling and hardness in the course of the superficial veins of the thigh are diminished.

9th. Complete collapse took place, and she sunk in the course of the afternoon. On the 10th I opened the body, with Mr. Prout of Welbeck-street, who occasionally saw her with me during the progress of the disease.

Dissection.—The intestines were distended with gas; their peritoneal coat had every where a healthy appearance, except a small portion covering the ileum, which was of a bright red colour, though it was not sensibly thickened. The lower part of the omentum, and portions of the mesentery and mesocolon, were also more vascular than usual, but no lymph was effused in these situations. The mucous membrane of the stomach, small and great intestines, was remarkably pale and bloodless. The left Fallopian tube, and fundus of the uterus, was of a deep red colour, but the sinuses of the

uterus, and its muscular coat, were quite healthy. Permission was not obtained to examine the head, chest, or extremities.

Case XIII.—Inflammation of the saphena veins fatal on the sixteenth day after parturition.

Mrs. Mills, æt. 30, a patient of the British Lying-in Hospital, was delivered of her fourth child on the 7th inst. after a natural labour. During the latter months of gestation she had suffered much from œdema, and a varicose state of the veins of the lower extremities. Two days after her confinement she began to complain of pain in the superficial veins of both legs, and, during the subsequent week a diffuse swelling and erysipelatous redness of the surface took place in the calf of the left leg, and in a less degree in that of the right. This was accompanied with violent febrile disturbance.

I first saw her on the 16th inst. the seventh day after the commencement of the disease. The pulse was 100; tongue red; countenance flushed; skin hot; and respiration hurried, with much jactitation and delirium.

The left lower extremity, now chiefly affected, presented the following appearances;—from the knee to the ankle, on its inner surface, the integuments were hot, swollen, and tense, and in several places large patches of a dark red colour were

observed over the veins, which being laid open in two places, a considerable quantity of purulent fluid was discharged. Where the swelling and tension were least, the superficial veins could be felt distended like hard cords, as could also the saphena, through its whole course upward from the ham to its junction with the femoral vein. In the course of this vein there was considerable swelling, and the integuments in this situation, as far as the middle of the thigh, were hot, and of a dark red colour.

The right leg was similarly affected, but in a very inferior degree to the left.

17th Oct. Pulse 120. Little marked change in the general symptoms. Left thigh much more swollen, and the saphena vein now painful, indurated, and enlarged. Above the ankle other two abscesses have formed, and been opened. A small abscess has also formed above the knee of the right extremity, which in other respects is improving.

19th. The left extremity, from the ankle to the groin, is on its surface more swollen and painful, and the saphena vein can be felt still more enlarged. The abdomen is tympanitic and exquisitely sensible on the left side when pressed. Pulse 160; subsultus tendinum; urgent thirst; tongue brown and parched; skin hot; countenance flushed and anxious; delirium diminished.

During the succeeding three days, there was a gradual exacerbation of all the symptoms, and she died on the 23d inst., being the 14th day from the commencement of the symptoms.

My friend Dr. Sims was present and assisted me at the dissection on the 24th, and the following is our joint report of the morbid appearances.

The extremity was very much enlarged. The cellular and adipose membranes from Poupart's ligament, along the inner surface of the thigh and leg to the ankle, were indurated, vascular, and infiltrated with a red coloured serous fluid. Several abscesses were observed in the cellular tissue immediately beneath the skin in the calf of the leg, and an extensive collection of purulent fluid had formed in the interstices of the gastrocnemii muscles. The branches of the saphena vein in this situation were converted into solid impervious cords, and the coats of this vein from the knee to its junction with the femoral were thickened and contracted, and in the lower part the cavity was nearly obliterated. The saphena vein was lined with an adventitious membrane of considerable thickness, which was easily separated from the inner coat. Its opening into the femoral vein, though reduced in size, was pervious, and the coats of the femoral from this point to the ham were thickened and contracted. The inner membrane was rugous, and of a deep red colour, but

no deposit of lymph was observable, and its canal was pervious.

The femoral vein above the termination of the saphena, and the whole of the external iliac were thickened, and slightly contracted in their diameters, and lined with a thin coating of lymph. These vessels were pervious, and the common and internal iliac exhibited no sign of disease.

The intestines were inflamed, and on the ascending colon there was a small part in a state of sphacelus.

Inflammation of the Veins of the Uterus and Phlegmasia Dolens have been usually considered as diseases peculiar to the puerperal state, but the following cases will shew that in malignant affections of the uterus, they may occur and give rise to the same symptoms which they manifest in puerperal women.

Case XIV.—Inflammation of the uterine veins, with carcinomatous ulceration of the os and cervix uteri.

A lady who had been suffering for some time from cancer of the os uteri, was seized on the 9th of May last with frequent vomiting, diarrhoea, and unremitting severe pain in the uterus. She be-

came extremely sallow and emaciated, and there was a constant discharge of a dark coloured watery fluid from the vagina. These symptoms continued until the 27th, when aphthous ulceration of the mouth took place; and a few days after, retention of urine. The emaciation, debility, and other symptoms went on increasing till the end of June, when she died. The body was examined by Mr. Griffith of Tottenham-court Road, who found all the viscera, except the uterus, in a healthy condition.

It is to the kindness of my friend, Dr. Ley, who was consulted by the patient, that I am indebted for the history of the case, and for the opportunity of exhibiting the preparation to the Society.

The anterior lip of the os uteri, and the greater part of its internal surface, and of the cervix, were disorganized by the softening of cancer; and a small ragged fungoid growth was hanging from these into the vagina, the mucous membrane of the upper portion of which to a small extent was ulcerated.

The uterine branches of the left hypogastric vein were distended with dense coagula of lymph, and their internal surface was of a bright red colour. The left spermatic vein to its division two inches and a half from the uterus, was coated with

a thin false membrane, and also completely plugged up with a coagulum of lymph, in the centre of which was a yellow pultaceous matter. The veins running along the side of the body of the uterus, and forming the communication between the spermatics and hypogastrics of the left side, were in the same condition, and distended like hard cords.

The veins of the right side of the uterus were similarly affected, but in a much slighter degree.

Case XV.—Inflammation of the left iliac and femoral veins, with phagedenic ulceration of the uterus.

On the 27th of July, 1829, I was invited by my friend, Dr. Girdwood, of Paddington, to be present at the examination of the body of a woman, aged 60, who had died two days before of a malignant disease of the uterus of several years' duration.

Five weeks before her decease, symptoms of Phlegmasia Dolens had appeared in the left inferior extremity. She complained of great pain in the thigh, and the limb had become swollen to nearly double the size of the other, without any discolouration of the integuments.

On opening the abdomen, the peritoneum covering the intestines and liver was found to be

severely inflamed with an effusion of three pints of sero-purulent fluid into the abdominal cavity. The mouth, cervix, and a great part of the body of the womb, were destroyed by phagedenic ulceration, and extensive openings formed into the bladder and rectum. On the left side, between the remaining portion of the uterus and the pelvis, to the brim of which it firmly adhered, was a spongy cancerous mass, enclosing within it the branches and trunks of the hypogastric vein and artery, and a considerable portion of the common and external iliac veins. When cut into, it presented a spongy texture, and a thick whitish purulent fluid escaped, as if from numerous cells, but which were subsequently ascertained to be cavities of veins. A portion of the common and external iliac veins was lost in the removal of the parts from the body. What remained of the common iliac was reduced to a slender tube, which was partially coated on the inner surface with an adventitious membrane of a black colour.

The commencement of the external iliac was also contracted, so as to be impervious, and lined with a dark coloured false membrane. The common superficial and deep femoral veins were all plugged up with firm red coagula, the coats thickened, and the inner surface lined with adherent false membranes.

The cellular texture of the limb was loaded with

serum, but in other respects it was healthy, as were the other tissues.

Dr. Willan has stated, on the authority of Dr. John Sims, "that the scirrhus or cancer of the uterus, which produces an offensive discharge from the vagina, is sometimes attended with an œdema, similar to that in puerperal cases", and other authors have alluded to the same occurrence*.

From the last case I have related, and from the following, which I have found recorded in the Sixth Volume of the Archives Generales de Médecine, it would appear that the disease is produced precisely in the same manner as it is after parturition, by an extension of inflammation from the hypogastric to the common and external iliac veins.

A woman, aged 50, died of cancer of the uterus, in the wards of La Charité. She had ascites and infiltration of the inferior extremities. On dissection, the principal veins of the lower extremities were found greatly distended with layers of coagulum, like those of an aneurismal sac, adhering intimately to their inner coats, which were red and thickened. The external iliac, hypogastric, and common iliac veins, and the vena cava inferior, to near the diaphragm, were found in the same condition.

* Willan's Reports of the Diseases of London, p. 325.

The manner in which cases of cancer of the uterus terminate, varies extremely in different individuals, some surviving many months the destruction of a great part of the body of the uterus and the adjacent structures, while others die at an early period of the disease, merely from a superficial erosion of the mouth or neck of the womb. This difference may depend, in some cases, on the greater or less degree of susceptibility of the constitution to the local injury ; but it seems highly probable, from the facts now related, that death sometimes results from the production of inflammation of the veins of the uterus.

In a man who died of cancer of the rectum in St. Bartholomew's Hospital, Mr. Lawrence observed the iliac veins inflamed and obstructed ; and Laennec has stated, that it is not uncommon to find the veins in the neighbourhood of a cancerous breast filled with pus, either pure or mixed with blood, sometimes fluid, at other times more or less inspissated, and occasionally of the degree of consistence of an atheromatous tumour *. It is evident, therefore, that inflammation may be excited in the great veins of the pelvis, in both sexes, by diseases of the neighbouring organs, and that this may be propagated to the principal veins of the lower extremities.

* Laennec, Forbes's Translation, 2d Ed. p. 652.

Such is a faithful relation of the facts, which have led me to conclude, that inflammation of the uterine veins is a disease of frequent occurrence, not only subsequent to parturition, but in the malignant organic affections of the uterus, and that the extension of this inflammation along the hypogastric to the iliac and femoral veins, is the cause of all the phenomena observed in Phlegmasia Dolens.

APPENDIX.

THE following interesting cases, which refer to the subject of the foregoing paper, have been kindly communicated to me since it was presented to the Society.

“MY DEAR SIR,

“The following are the particulars of the case which I narrated at the meeting of the Medico-Chirurgical Society, when the second part of your interesting paper on Uterine Phlebitis was read. It is of importance, in connexion with your paper, from the similarity of the symptoms to those which attend inflammation of the veins, and from the rare occurrence of inflammation of the substance of the uterus, in comparison with that

of its surfaces, and also from the extent to which the pus had filled the absorbents, without any inflammation of the veins.

“ T. S., aged about 30, was admitted into St. George’s Hospital, July 1, 1829, under my care, in consequence of sloughing of the skin to some extent over a diseased bursa of the patella. The bursa was removed, which was a quarter of an inch thick, and a granulating surface established without more constitutional disturbance than had been excited by the sloughing, which was never very great, and she was going to leave the hospital in order to lie in, which event she expected in two or three weeks.

“ On the 14th, however, she was brought to bed in the hospital, the child being ill grown, and dying soon afterwards.

“ On the 16th, symptoms of puerperal peritonitis of a low character made their appearance, which was fatal on the 18th; the pain, I understand, was completely relieved by bleeding, but she never rallied after the commencement of the attack.

“ Some puriform lymph was found in the pelvis, but with no increase of vascularity in the peritoneum. A considerable quantity of the same kind of fluid was situated round the whole of the lower

part of the uterus beneath the peritoneum, and in the cellular membrane among the fibres of the uterus, but none had been effused at the fundus.

“ In the broad ligaments some fluid was also effused, and on each side numerous large absorbent vessels were discovered passing up with the spermatic vessels to the receptaculum chyli, which was unusually distended. All these vessels and the reservoir itself were quite filled with fluid pus, but that in the receptaculum was mixed with lymph so as to be more solid; the vessels themselves were firmer and thicker than usual. The thoracic duct above this part was quite healthy, and contained only transparent lymph. The spermatic and uterine veins were all healthy. The uterus was scarcely contracted at all, and the internal surface of the lower half was soft and shreddy, and in a state of slough. The upper part, where no pus was found externally, was also healthy, or nearly so, on its inner surface. The rest of the viscera were healthy.

“ I am, my dear Sir,

“ Faithfully yours,

“ CÆSAR HAWKINS.”

“ 31, Half-Moon Street, Oct. 31st.”

Note.—By A. COPLAND HUTCHISON, ESQ., F.R.S.

“ Phlegmasia Dolens cannot be supposed always to originate in the veins of the uterus, for we have occasionally examples of it in the male sex. The valuable contribution to the history and true pathology of this disease, by my friend Dr. Robert Lee, now before the Medical and Chirurgical Society, has induced me to offer a case in the shape of a Note to his interesting paper, and which I think deserving of record, chiefly on account of a gentleman being the subject of attack, which so very rarely occurs, and from the accident which occasioned it being, comparatively, of so slight a nature.

“ Mr. B., lately returned from the Isle of France, where he had resided upwards of twenty years, received a blow upon his right shin, immediately over a branch of the saphena vein, by a small piece of timber accidentally falling upon it. The scar is very slight, though the injury and its results appear to have been severe, and the patient states that the accident was followed by considerable swelling and inflammation all over the limb, and that the abraded surface was very long in healing. Mr. B. says he first felt pain in the direction of the upper third of the saphena before it actually dips to unite with the femoral vein. The whole leg and thigh soon became enlarged and inflamed, the former partly edematous; and

although the patient states the disease to be slowly on the decline, yet the enlargement of the thigh and leg still continues, and he has pain from the groin to the heel and sole of the foot, principally in the direction of the branches of the saphena, with a slight blush of redness over the fore part of the leg, where the original injury was received; but while the member is kept in the horizontal position he is nearly free from pain.

“I have traced the upper portion of the saphena vein, and find it to be a complete ligamentous cord for eight or ten inches, but the femoral vein seems to me to have hitherto escaped the diseased action. The patient has no pain or uneasiness within the pelvis, and his general health is good. It should be stated, however, that the testis of that side is slightly enlarged, but not indurated. Sir Gilbert Blane and Dr. Lee saw the patient with me in consultation three days ago.”

“Duchess Street, Portland Place.

“October 19, 1829.”

THE END.

Plate 6 Vol. XV.



Dissection of the Leg

Dissection of the Leg

Dissection of the Leg





