CHAPTER XXI.

PERIMETRIC HÆMATOCELE; RETRO-UTERINE HÆMATOCELE; PELVIC HÆMATOCELE; BLOOD-EFFUSIONS IN THE NEIGHBORHOOD OF THE UTERUS; PATHOLOGICAL DISCUSSION; GROUPS OF CASES: 1. FROM RUPTURE OF UTERUS, GRAVID; 2. RUPTURE OF ECTOPIC GESTATION-CYST; 3. RUPTURE OF DISEASED OVARIES; 4. EFFUSIONS ATTENDING ABORTION; 5. EFFUSIONS FROM MENSTRUAL OBSTRUCTION; 6. FROM ALTERED CHARACTER OF BLOOD; OTHER CAUSES; SYMPTOMS AND DIAGNOSIS; COURSE; TREATMENT.

THE study of perimetric hæmatocele most conveniently follows immediately upon that of perimetric inflammation. Clinically, the two conditions have close relations. Indeed, blood-effusions into the peritoneum almost necessarily entail pelvic peritonitis. And at the bedside the practical difficulty often is to distinguish hæmatocele from inflammatory effusions. It is certain that until within the last twenty years, or less, cases of perimetric hæmatocele were confounded with inflammatory effusions or with retroversion of the uterus. It can hardly be said that hæmatocele had been recognized as a distinct affection. And even now many men are slow to admit the evidence upon which its existence is established, and are consequently unable to appreciate the frequency or the conditions of its occurrence.

In 1850 the disease was so little known that Malgaigne is reported to have attempted the enucleation of a supposed fibroid tumor of the uterus, which proved to be a collection of blood; and the operation was followed by a fatal issue. And Scanzoni says, in his work on *Chronic Metritis*, published in 1863: "We regret not to be in a position from personal experience to speak of this disease, for in our certainly extensive and protracted observation we have not been able to diagnose peri-uterine hæmatocele in a single case."

So long ago, however, as 1831, Récamier described in the *Lancette Française*, under the name of "Tumeur sanguine du bassin," a very clear case. A woman, aged twenty-eight, after an abortion, had a large tumor formed in the pelvis, behind the uterus, which bulged the vagina forwards. Récamier, believing it to be an abscess, opened it, but instead of pus, dark, half-coagulated blood escaped. The patient recovered.

Velpeau, in his *Médecine Opératoire*, 1839, published additional cases. He was evidently acquainted with the characteristic features of the pelvic blood-swellings.

In 1850 and 1851 Nélaton, in lectures in the *Gazette des Hôpitaux*, laid the foundations of the present more accurate knowledge of the subject. It was he who proposed the name "retro-uterine hæmatocele." From this date cases and memoirs, still chiefly emanating from the French school, rapidly multiplied; proving that it was only necessary to look for examples of this hitherto unknown affection with intelligence, in order to find them. Viguès, Fenerly, Aran, Prost, Bernutz, Puech, Nonat, Laborderie, Laugier, Voisin, Gallard, Richet, Goupil, and Trousseau, have all contributed important materials.

In England Tilt and West were the first to describe the affection. McClintock has given the best original account in the English language.[1] He had published a case in the *Dublin Hospital Gazette* in 1860. In 1861 Dr. Madge communicated to the Obstetrical Society a very complete report of a case, illustrated by figures, representing the conditions found on dissection, and commented by a valuable review of the subject. Dr. Tuckwell, in 1863, published an important memoir, entitled "On Effusions of Blood in the Neighborhood of the Uterus." This contains an excellent historical sketch, a tabular view of ninety-eight cases collected from various sources, and histories of some original cases not before published.

In Germany contributions have been accumulating since 1859. C. R. Braun, Alfred Hegar, Säxinger, Seyfert, Olshausen, and others have added materially to the casuistical history of the subject.

Bernutz claims to have been the first to demonstrate by post-mortem examination the position and relation that these tumors hold to the uterus. He was the first to maintain that many cases directly depended upon retention of menstrual blood.

The Seat of the Blood-tumor.—The term "perimetric hæmatocele" is used to define the state of tumor formed by effusion of blood in the neighborhood of the uterus. It is more comprehensive than "retro-uterine hæmatocele," which strictly means a blood-tumor behind the uterus. This latter term is correct as far as it goes. It would be altogether correct if it expressed the whole truth; that is, if blood-effusions were not liable to occur elsewhere than behind the uterus. But blood-effusions do occur in other relations to the uterus. To admit these into a general definition we want the term perimetric or peri-uterine hæmatocele; or perhaps the term "pelvic hæmatocele," proposed by Dr. McClintock, being more comprehensive, is better still.

If we start from the arbitrary definition which some have proposed, namely, to restrict the term hæmatocele to blood-effusions into the peritoneal cavity, it would almost necessarily follow that the adjective, retro-uterine, is the proper and only one to employ. For, if blood be poured out into the peritoneal cavity in the neighborhood of the pelvis, it must gravitate to the retro-uterine pouch, which is the lowest part of the general cavity. The ante-uterine or utero-vesical pouch is so shallow, and is so liable to disturbance or obliteration, by the filling and rising of the bladder, that lodgment of fluid blood in this position is rarely possible. If a little blood were to find its way into this pouch it would probably soon be dislodged, and made to run over the fundus of the uterus and the upper edge of the broad ligaments into the pouch behind. Moreover, the most frequent sources of effused blood are the ovary and the extremity of the Fallopian tubes, and these parts being in the posterior wing of the broad ligament, blood from them naturally falls direct into the posterior pouch. Intra-peritoneal effusions then are almost always retro-uterine.

But is this all we have to consider? Are there no other blood-effusions?

[1] Diseases of Women, 1863.

Adhering to the cardinal principle of this book, that of making scientific pathology subsidiary to clinical work, I have determined to bring together all the blood-effusions which may take place in the neighborhood of the uterus; and then to proceed to analyze or differentiate them as best we can by the aid of the history and symptoms of individual cases and of general experience and pathological knowledge. It is only in this way that we can usefully investigate any given case. We may not know, in the first instance, what the source of the bleeding may be, or the particular nature of the lesion which led to it. That is a problem to be solved by clinical investigation. In a memoir on this subject[1] I distributed in groups all the cases I had met with which were characterized by the escape of blood in considerable quantity in the pelvic peritoneum. Some of these groups included cases which those who look at the subject from a rigorously special point of view refuse to recognize as legitimate examples of retro-uterine hæmatocele. But the objection, I submit, is critical, not practical. It seems unreasonable to contend that a case of rupture of the uterus, or of an extra-uterine gestation-sac, one of the almost certain effects of which is effusion of blood into the peritoneum, is not a case of retro-uterine hæmatocele. It is quite arbitrary to restrict the term to effusions of blood the result of one particular cause; for example, rupture of ovarian vessels. In no case is the outpoured blood the disease. It is only a consequence of some lesion or injury. In some cases the more immediately serious symptoms are due to the shock of the injury; in others to the loss of blood and the attendant shock. This difference is an accident; of clinical importance, it is true, but still not such a difference as to dictate absolute separation of the cases possessing so important a common feature as hemorrhage.

The clinical physician, indeed, must take even a wider survey. He must contemplate the probability of a given swelling behind the uterus, or apparently behind it, not being a blood-tumor. Numerous bodies occupy precisely the same locality and relations; may entail almost identical symptoms, subjective and objective. So in the first instance we are compelled to study all these conditions together; to analyze them if we would justify the hope of differentiating for the scientific purpose of pathology, or the practical purpose of treatment. In this spirit I have written a further memoir on "Retro-uterine Tumors,"[2] in which I have brought together and distributed in groups some of the most strikingly illustrative cases which come under this general clinical description.

In all the cases of hæmatocele, the hemorrhage, sooner or later, is a serious element. First by the shock caused by the sudden impression of the outpoured blood upon the peritoneum; secondly, by the loss of blood; thirdly, by the consequent peritonitis. The patient may be destroyed by the shock alone, or by the shock combined with the loss of blood, before there is time for inflammation to arise. This is to say, that in those most formidable cases, as of rupture of the uterus, or of an extra-uterine gestation-sac, life may be extinguished before a hæmatocele, properly speaking, is formed. But this is no more than is true of those usually less fulminating cases, in which the blood proceeds from burst ovarian

[1] St. Thomas's Hospital Reports.
[2] St. George's Hospital Reports, vol. viii., 1877.

vessels. In these cases sometimes the shock and bleeding kill before a tumor can be formed by the segregation of the blood by inflammatory effusions. In all there are common features which bind them together as members of one clinical family.

Putting aside then for the present all pathogenic theories, we shall find that the cases of perimetric hemorrhage may be arranged as follows:—

Peri-uterine Tumors (hæmatic).

- A. Intra-peritoneal (retro-uterine).
  - I. Non-encysted (cataclysmic).
    1. Rupture of uterus.
    2. " of tubal or other ectopic gestation-cysts.
    3. " of ovary.
    4. " of sub-ovarian vessels, or from a uterine varix.
    5. Aneurisms.

    (Wilks refers to intra-peritoneal effusions from liver and from heart-disease.)
  - II. Encysted (peritonitic). { 1. Menstrual. 2. Abortion. } regurgitant.
- B. Extra-peritoneal.
  - I. In the broad ligaments.
  - II. In cellular tissue between cervix uteri and bladder.
  - III. In cellular tissue between uterus and rectum.

I do not pretend that this is a rigorously exact classification. Hemorrhage from rupture of an extra-uterine gestation-sac may become encysted; hemorrhage from menstrual deviation may be cataclysmic. But if we regard the arrangement simply as a framework for description, it will be found useful in aiding to obtain a clear knowledge of the subject.

When blood is rapidly poured out in large quantities into the peritoneal cavity the shock and loss of blood alone, as we have seen, may kill. No opportunity is given for the establishment of the conservative process of inflammation which, by segregating the blood in one mass in one compartment of the peritoneum, limits both the quantity of blood effused and the area of irritation, and hence the extent of shock. In such a case the hemorrhage is said to be "non-encysted." Looking at the terrible suddenness and severity of the blow struck at the vital powers, I have called these cases "cataclysmic."

The most common causes of the effusion in these non-encysted or cataclysmic cases are rupture of the uterus, gravid or not gravid, rupture of a tubal gestation-cyst, rupture of a diseased ovary, or of a varix of the pampiniform plexus.

But in some cases where the hemorrhage is due to one of these causes the blood does become encysted. The course they run resembles closely that run by the cases of the second order in which the source of the blood is the gorged vessels of the ovary, or the Fallopian tubes during menstruation or abortion. And even in some of these latter cases the blood

is poured out so rapidly that it does not become encysted. These too may be cataclysmic.

Instances of encysted hæmatocele resulting from ruptured extra-uterine gestation-sacs are reported by Voisin, Aran, and myself, and many others.

Nor can the extra-peritoneal cases be on sound clinical or pathological grounds separated from the intra-peritoneal cases. If we base our classification or definition on origin, we shall find that some of the same causes which lead to blood-effusions into the peritoneum may lead to blood-effusions outside the peritoneum into the perimetric cellular tissue. And more than this, we shall find cases in which the blood being first effused into the cellular tissue has burst its way through the peritoneum into the peritoneal cavity; thus breaking down the arbitrary barrier which theory had placed between the two orders of cases.

We see then from this statement that the perimetric blood-effusions are brought into close pathological and clinical relationship with the so-called "thrombus," or blood-effusion in the peri-uterine cellular tissue. It is this relationship which justifies the term "Pelvic Hæmatocele," proposed by Dr. McClintock. It is true some authors of deserved repute would exclude all but intra-peritoneal effusions. The objection to ranking extra-peritoneal effusions along with intra-peritoneal effusions has been insisted upon by Voisin and Bernutz. The latter author contends that the extra-peritoneal effusions are thrombi, and only result from labor. But the objection of Aran is more pointed, as being based on a clinical distinction. This excellent author affirms that there are no sub-peritoneal perimetric blood-tumors at all important in size, so as to come into consideration. They cannot become large because they are limited within the cellulo-fibrous layer covered in by the peritoneum. To this it may be answered that intra-peritoneal retro-uterine effusions are not always very large; and that small tumors of this description may be equalled in size by some extra-peritoneal ones, especially where complicated with inflammatory effusions, the extent of which can hardly be defined from the blood-effusion. And Huguier, Nonat, Robert, Becquerel, Verneuil, Prost, all maintain that hæmatocele may be extra-peritoneal. In some extra-peritoneal cases, Nonat says, the tumor is nearer the anus. Prost relates two well-authenticated cases, in one of which the blood was effused between the layers of the broad ligament, and in the other it occupied the connective tissue behind the uterus. Tuckwell cites Becquerel as relating a case in which more than two pounds of blood were found outside the peritoneum, the blood having dissected its way between the different organs, and displaced them all. A specimen, presently to be described, in Bartholomew's Museum, seems a clear example of large extra-peritoneal hæmatocele.

If we look to the source of some intra-peritoneal effusions, we cannot fail to see that the effusion into the peritoneum is accidental, that the blood would be quite as likely to make for itself a sac in the cellular tissue of the broad ligaments. For example, a varix or the dilated pampiniform plexus may be supposed to give way without rupturing the peritoneum, the blood finding a lodgment by separating the peritoneal investments of the broad ligament.

Olshausen (*Arch. für Gynäkol.*, 1870) relates a case of sub-peritoneal *ante-uterine* catamenial hæmatocele following on acute dysmenorrhœa. Fever, absorption, and recovery ensued. The anterior lip of the os uteri was short, whilst the anterior vaginal roof was driven backwards by a tumor of half-soft consistence.

I have seen two cases which I believed were examples of ante-uterine hæmatocele, probably extra-peritoneal, since they corresponded in relations to the thrombus which forms in front of the uterine neck during labor. Both cases came under my observation in the chronic stage; in both there was a firm tumor, the size of a small orange, in front of the uterus, throwing the fundus uteri backwards. The diagnosis was confirmed by the gradual complete disappearance of the tumor, without any signs of rupture or suppuration. These cases meet the objection of Aran that extra-peritoneal blood-tumors cannot be large enough to enter into clinical consideration. Professor G. Braun relates (*Wien. Med. Wochenschr.*, 1872), a case—he thinks the only one—in which ante-uterine intra-peritoneal hæmatocele was diagnosed during life. A married woman, aged thirty-five, had a smooth elastic swelling in front of the uterus. Dieulafoy's trocar gave issue to a pint of dark-red blood. Collapse and death followed. A sac, the size of a fœtal head, was found in the left side of the pelvis, in front of the uterus. There was also peritonitis.

Tuckwell found in the synopsis of cases made by him that the blood was found to be intra-peritoneal in thirty-eight out of forty-one post-mortem examinations; that in twenty-six of the thirty-eight it was diffused, and in twelve circumscribed, and limited to the retro-uterine cul-de-sac. I have seen several cases of extra-peritoneal hæmatocele verified by puncture. There is an excellent specimen in St. George's Museum.

We are then drawn to the conclusion that there are cases of both kinds; but that the intra-peritoneal blood-effusions are by far the most common, apart at any rate from pregnancy and labor.

Admitting that for clinical purposes we want not alone a comprehensive view of all pelvic blood-tumors, but also a comprehensive view of all pelvic tumors which by location, relations, or symptoms resemble blood-tumors, it will be useful in this place to give a grouped arrangement of the non-hæmetic tumors. The following table is drawn from the memoir on retro-uterine tumors referred to:—

Retro-uterine Tumors (not Hæmatic).

I. Retroversion of the uterus. { *a.* Gravid. *b.* Non-gravid.
II. Ectopic gestation-cysts. { *a.* Tubal. *b.* Abdominal.
III. Ovarian cysts.
IV. Dermoid cysts.
V. Cystic tumors of broad ligaments.
VI. Cystic enlargement of Fallopian tubes.
VII. Retro-uterine or peri-uterine inflammatory deposits or abscess.
VIII. Uterine fibroids. { *a.* Loose. *b.* Projecting from hinder wall of uterus.
IX. Malignant tumors.

Perimetric hemorrhage may occur in the pregnant state and in the non-pregnant state; and in either case the effusion may be intra-peritoneal or extra-peritoneal. It does not fall within the scope of this work to describe the accidents of the pregnant state. But some of the conditions of uterine pregnancy, and more especially those of abnormal pregnancy, are so connected with the history and diagnosis of perimetric hæmatocele that no complete idea can be formed of the subject, if we exclude the blood-effusion of pregnancy from the discussion. An all-sufficient reason for taking these into account is that in many instances we cannot know at the time of the accident what the source of the hemorrhage is, or whether the subject is pregnant or not.

The *pathology of intra-peritoneal hæmatocele* is well illustrated in the following cases. Olshausen relates[1] the case of a woman, aged twenty-five, who was delivered in March, 1863, of her first child. Menstruation returned regularly until the middle of September. In the middle of October it returned too early, and with repeated pain in the belly, and vomiting. Thenceforward metrorrhagia lasted for seven weeks. She walked into the physician's room. There was frequent desire to micturate. In the median line of the abdomen was a ball-shape, somewhat painful tumor, the size of a gravid uterus at three months. The os uteri was driven against the symphysis pubis; behind it was a ball-shaped, slightly painful elastic swelling, filling the hollow of the sacrum. The tumor became less in bulk, and harder. She died in June, 1864, of typhus. At the autopsy adhesions were found in Douglas's space, especially behind the broad ligaments. A membrane extended from the point of insertion of the left broad ligament to the cervix uteri backwards to the rectum, dividing off a small portion of the retro-uterine pouch; in this a small coagulum remained, containing fluid in its centre. It lay quite free. The space showed a remarkable pigmentation abruptly terminating above, yellow and black in the tissue of the peritoneum. Both ovaries adhered to the uterus.

The anatomical illustrations in the London museums are few. Amongst the most striking is one in St. Thomas's, a representation of which is given in Fig. 108.

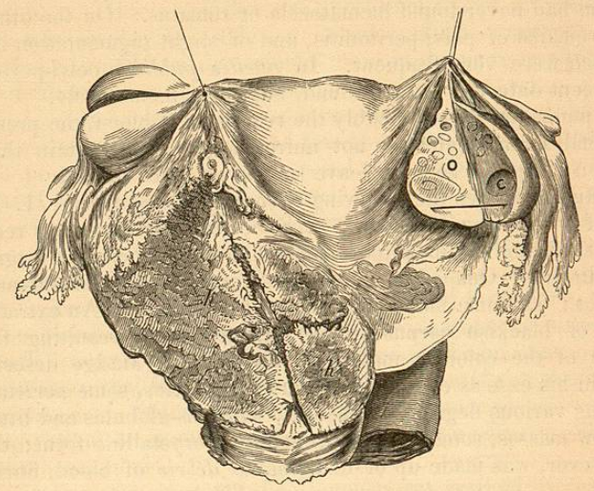
There is a very interesting specimen in Guy's Museum (Fig. 107). It is not described in the catalogue. It shows the remains of a blood-cyst, *h*, *h*, behind the uterus in Douglas's pouch. The area involved behind the left broad ligament and the left of the uterus further illustrates the anatomical relations of Douglas's sac which I have described. The peritoneal surface is roughened by inflammatory deposits tinged with blood-débris.

There is a specimen in St. Bartholomew's Museum of special interest (No. 31.36) thus described: "Uterus and appendages. Between the layers of the right broad ligament is a globular cyst, about as big as a walnut, whose walls in the recent state were seen to be formed by the separated layers of the ligament, and whose cavity was filled with quite recent blood coagula. On the anterior aspect of the cyst were two small, recently formed irregular openings.

[1] Archiv für Gynäkologie, 1870.

"From a patient, aged twenty-five, who, while in the hospital for treatment of warts on the vulva, was suddenly attacked with symptoms of internal hemorrhage, and died in twelve hours. Post-mortem: The cavity of the peritoneum contained five pints of recently shed blood,

Fig. 107.



Remains of a Retro-Uterine Hæmatocele (R. B.).

o. The right ovary laid open. *h*, *h*. The roughened peritoneum of Douglas's pouch, which formed the anterior wall of the sac of the hæmatocele. (From Guy's Museum, half-size.)

loosely coagulated; and dark fluid blood oozed slowly from the openings in the cyst above described. The interior of the uterus, along with all the other parts of the body, was very pale. Careful examination failed to discover the source of the hemorrhage. No evidence of extra-uterine pregnancy, no ruptured vessel was discovered. It is uncertain whether the patient was menstruating at the time of the attack."

The nature of the cyst in the broad ligament is not clear. Was it a simple cyst, such as is not unfrequently seen in this situation? If so, how can we account for its becoming filled with blood? Is it a true extra-peritoneal hæmatocele, resulting from rupture of a vessel in the broad ligament, the sac subsequently bursting, and giving rise to a cataclysmic intra-peritoneal effusion? This seems to be the more probable conjecture. At any rate, the specimen gives anatomical demonstration of the possible existence of extra-peritoneal hæmatocele.

The following case from Olshausen affords distinct evidence of the genesis and nature of the affection. Atresia of the vagina after typhus; hæmatometra and hæmatocele; death by peritonitis; regurgitation of blood through the tubes. When the subject came under treatment fluctuation was felt by rectum. Puncture made by rectum let out a little thick blood. Two days later at stool a larger quantity was voided. Peritonitis and death quickly followed. On dissection diffuse peritonitis, with copious purulent exudation, was found. Blood-remains were seen

in Douglas's pouch. The uterus was much enlarged; its cavity empty. Both tubes were much dilated, darkly pigmented inside, chiefly towards the uterine ends. Both ostia uterina allowed a sound to pass easily. The left ovary contained several small cavities filled with blood; it adhered to the uterus.

Dr. Jüngel told Dr. Ferber that in about 3000 minute dissections of women he had never found hæmatocele or remains. On the other hand, obvious remains of pelvi-peritonitis, and of slight pigmentation of Douglas's pouch were very frequent. In *puellis publicis* pelvi-peritonitis of old or recent date was always found, but never hæmatocele.

Since pigmentation is probably the residuum of blood, the presumption is that small hæmatoceles are not unfrequent. It is certain that adhesions often disappear so as to leave scarcely a trace behind.

Heurtaux describes the following *contents of hæmatocele:* 1. Droplets like oil of a brown-yellow color; 2. Spherical cells entire or reduced to fragments, abounding in adipose nucleoli; 3. Amorphous fragments of hæmatoidine; 4. Quadrilateral crystals, resembling ammonio-magnesian phosphates; 5. Some blood-globules, well colored; 6. An extraordinary quantity of blackish corpuscles, of various forms, resulting from the alteration of the coloring matter of blood. Dr. Madge describes the contents in his case as consisting of blood-corpuscles, some perfect, others undergoing various degrees of change; also pus-globules and little black and yellow masses, some of them assuming a crystalline form; the chief part, however, was made up of undefinable *débris* of blood, fibrine, and pus.

The Source of the Blood-effusions.—The seat of the blood-effusion being not constant, it almost necessarily follows that the source is not constant. I propose to enumerate the various sources to which the hemorrhage has been traced. This review will throw considerable light upon the subject. In the first place, we may state generally that blood may be poured out from the ovaries, the Fallopian tubes, the uterus, and from the broad ligaments; in the second place, it may proceed from an extra-uterine gestation-sac, ovarian, tubal, or abdominal; in the third place, it may proceed from lesion of some abdominal structure, as aneurism of the aorta, or of the mesenteric arteries.

Group I.—In *ordinary uterine pregnancy* the uterus may rupture at any time. H. Cooper[1] relates a case of rupture of the gravid womb in the third month. At subsequent periods rupture becomes progressively more frequent. In almost all, if not in all, cases of rupture during pregnancy, the rent is through the body of the uterus; and therefore the blood escapes into the peritoneal cavity, the ovum or embryo being either retained in the uterus or expelled into the peritoneum. In the first case, there is strictly intra-peritoneal hemorrhage. In the second, there is intra-peritoneal hemorrhage, complicated with the presence of the embryo and ovum. In either case the blood may or may not coagulate, and become encysted. The more likely event is that it will not become encysted, but that the patient will die of the shock.

The blood rarely coagulates more than partially: remaining liquid, it

[1] British Medical Journal, 1850.

is diffused over the intestines, only a portion being able to settle in the pelvic cavity; the conservative peritonitis which under more favorable circumstances secludes the blood in the pelvic region by plastic effusions cannot take place. It does not, in technical language, become "encysted." It therefore does not form a tumor: it is not a "hæmatocele." It is the most severe form of intra-peritoneal hemorrhage, resembling the bursting of an aneurism. It is a cataclysm of blood, not a slow or gradual effusion. In this respect, but differing in some of its symptoms, cases of rupture of the gravid uterus resemble those in the next group, in which the cyst of an extra-uterine gestation bursts.

Group II.—In *abnormal or ectopic pregnancy*, rupture of the fruit-sac is a much more frequent issue; and this at so early a period that the existence of pregnancy may be unsuspected or doubtful. This subject has been treated of in some detail in a special chapter. It is only necessary here to call to mind, 1st, that the bursting of an abnormal fruit-sac is often preceded by metrorrhagia, resembling in this respect the more typical cases of intra-peritoneal hemorrhage, in which the blood flows from the ovary or Fallopian tube; 2dly, that the severity of the injury, the quantity of the blood effused, and the rapidity with which it is poured out, induce such a degree of shock that the blood rarely becomes coagulated and encysted, so that the case, like that of rupture of the gravid uterus, is "cataclysmic." Still in some cases there is reason to believe that the blood may coagulate, become surrounded by plastic effusions, and constitute a true hæmatocele.

The following case, in which the diagnosis was verified by post-mortem examination, shows the possibility of a true hæmatocele forming as the result of rupture of a tubal gestation-cyst: *Fallopian Gestation—Pelvic Hæmatocele—Death—Autopsy.* In 1867 I met Mr. Swales and Mr. Jaap, of Sheerness, and Dr. Jardine, of Chatham, in the case of Mrs. J. Being presumed to be two months pregnant she had been taken with abdominal pain and flooding, but got better. On the 26th of November, being out at dinner, she was seized with acute abdominal pain, prostration, and was with difficulty got home. The following day she was much worse: vomiting, hiccough, tympanitis; urine not retained.

The case had at first been taken for retroversion of the uterus, as the os was near the pubes, and low down, and a swelling was felt behind the os, simulating the body of the uterus. I passed a catheter into the bladder; there was no obstruction. *Per rectum:* there was a firm swelling in the roof also felt by the vagina. The os uteri was open, admitting the tip of the finger; it was pointing downwards. The sound curved entered nearly an inch beyond the normal length in a forward direction, over the symphysis; the swelling behind was, therefore, not the uterus. The uterus was fixed rather low in the pelvis, and driven forwards by the mass behind.

The sickness and pain abated somewhat, but otherwise there was no amendment. The patient died under the shock and loss of blood on the 30th. Mr. Jaap wrote to inform me that a "post mortem was performed on the 2d December by Mr. Swales, assisted by the staff-surgeon of the dockyard and Mr. Keddell. It must be a melancholy source of gratification to you to know that your diagnosis was verified in every iota."

Mr. Swales communicated the following: "The body was completely blanched; I was shown what was called an adhesion between the left Fallopian tube and the intestines which had been cut away; it certainly was not an adhesion, the product of peritonitis, about the thickness of the thumb; it was more like half-organized fibrin; the Fallopian tube had been ruptured, in my opinion, at the point to which this so-called adhesion had been attached; the uterus was very pale, enlarged; all the other organs healthy; an immense amount of coagulated blood was packed in among, and almost covering, the uterus and other pelvic contents, besides which there was a large quantity of serum. No ovum was found. I formed the opinion that it was a case of arrested ovum in the Fallopian tube which had escaped into the peritoneum; but that she died more from the internal hemorrhage than from inflammation."

Group III. Rupture of diseased ovaries.—This appears to be a very frequent source of the severer forms of intra-peritoneal hemorrhage. Cystic ovaries of all sizes may rupture. In some cases the fluid effused in chief proportion is that proper to the cysts, the amount of blood being inconsiderable. In other cases, the large vessels in the walls of the cysts may be torn, so that hemorrhage may be great. In yet other cases, there may escape both blood in considerable quantity, and viscid or puriform matter from the cysts. In the latter cases, the blood effused being mixed with a peculiarly irritating fluid, peritonitis is sure to ensue if the patient survives the first shock of the injury. This peritonitis naturally tends to segregate the effused matters; but the segregation is rarely so complete as in cases where blood alone is effused. The peritonitis often takes the lead as the more urgent disease, and is commonly the immediate cause of death.

Rokitansky describes as one source of the blood in hæmatocele the bursting of cysts of the ovary formed of distended follicles into which blood has been extravasated.

In those cases where the blood-effusion predominates, the symptoms and consequences resemble those of rupture of tubal gestation-cysts. There is at first preponderance of shock over anæmia; and the encystment of the blood is rarely complete. But in a case which came under my care in St. Thomas's Hospital, and which I have related in detail in the memoir above referred to, complete encystment did take place. It thus connects the series very distinctly with the classical retro-uterine hæmatocele.

As the case is made complete by a post-mortem examination, and is illustrated by the preparation preserved in the museum, and by a diagram, I think it desirable to reproduce it.

Retro-uterine Hœmatocele from Rupture of a Diseased Ovary—Puncture—Death—Autopsy. Condensed from Report of Dr. Seaton, Resident Accoucheur.—M. A. C., aged thirty-six, married, having eight children, was admitted into St. Thomas's Hospital, June 13th, 1870, under Dr. Barnes. She had been attending as an out-patient, and as she had had some difficulty in passing her water he deemed it advisable to take her in. The history she gave was that six months ago she was taken suddenly with pain in the stomach whilst engaged in washing, and that this happened at a menstrual period.

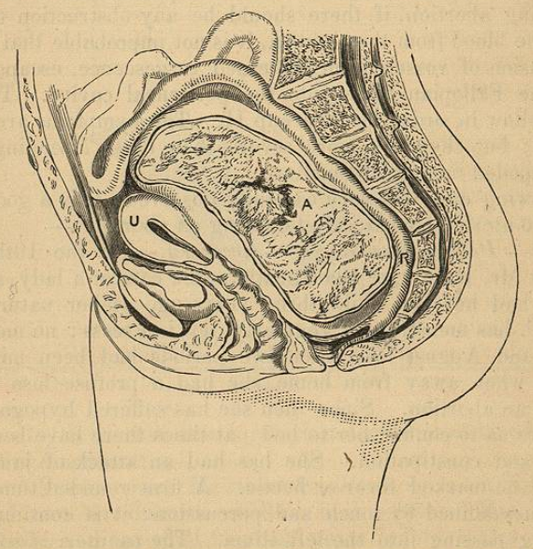
The difficulty in micturition had lasted for about three weeks, and it had now become so great as to necessitate the employment of the catheter. On examination *per vaginam* this retention was found to be due to a tumor occupying a median position in the posterior wall of the vagina, in feel resembling the retroverted gravid uterus. The os was high behind the symphysis; the sound passed upwards and forwards, over the symphysis, showing that the uterus was compressed bodily forwards, and was distinct from the tumor.

June 28th. As the hectic condition persisted, indicating that blood-poisoning was progressive, Dr. Barnes punctured the tumor, which was now distinctly fluctuating. A fine trocar was thrust into the most depending part of the tumor. There flowed away about two ounces or more of dark treacly fluid, like retained menses. After the operation the tumor was found to have become flattened instead of forming a bulging prominence as before.

During the six succeeding days the pulse rose to 120 to 150, and more, the temperature to 103.6°, falling to 101° on the last day, when she sank, pain and vomiting having persisted.

The autopsy was made on the following day, and confirmed the diagnosis. The fundus uteri was pushed forwards above the symphysis;

Fig. 108.



Representing a Retro-uterine Hæmatocele from a Diseased Ovary (Dr. Barnes). St. Thomas's Hospital Museum.

U. The uterus pushed forwards. A. The hæmatocele filling the cavity of the sacrum, bounded above by plastic effusions and the small intestines.

behind it was a tumor, semi-fluctuating, which was opened by slight manipulation, and then showed masses of partly coagulated, partly fluid blood, and some bubbles of air. This blood was contained in a cyst, bounded above by the intestines, in front by the posterior wall of the

uterus, behind by the anterior wall of the rectum, and below by the floor of the pelvis and the depressed posterior wall of the vagina. The cyst walls were formed by peritonitic plastic matter. The relations and extent of the tumor will be seen by the diagram (Fig. 108), which, with the assistance of Mr. Stewart, the curator of the museum, and of Mr. Denison, librarian, I have constructed from the preparation and my notes of the examinations made during life. No trace of the right ovary could be discovered, unless a smooth serous-looking cyst, projecting from and opening widely into the main cyst, were the remains of it. At this point was firmly adherent a clot of blood. It seemed to be the source of the hemorrhage; and it was concluded that the case was one of diseased ovary which had burst, discharging blood into the retro-uterine pouch, probably gradually at different intervals. The course of the trocar was traced by small punctured wounds; it penetrated the lower posterior wall of the vagina, then a small duplicature of the rectum before entering the cyst. In another case which came under my care, a post-mortem examination showed that the source of the blood was a cancerous ovary. The blood was encysted. I have seen a similar case with Mr. Curling in a woman aged forty. The right ovary, of the size of a large walnut, in cystic degeneration, had burst. The preparation was examined at St. Thomas's Hospital.

Group IV. Effusions of blood into the peritoneum attending abortion.—During abortion, if there should be any obstruction to the free escape of the blood from the os uteri, it is not improbable that, under the extreme tension of vessels from increased turgescence, escape may take place by the Fallopian tubes into the peritoneal cavity. These cases naturally follow in order upon Group II. The symptoms are generally less severe; but they are more severe than those attending ordinary cases of impeded menstrual function.

The following case was very carefully observed; it is a good illustration of retro-uterine hæmatocele following on abortion:—

Abortion—Pelvic Hæmatocele—Recovery.—On the 19th October, 1867, I met Mr. Burton, of Blackheath, in the case of a lady, aged forty-two. She had her last child three years ago; labor natural. Since then Mrs. C. has menstruated regularly, not in excess; no metrorrhagia until July and August last, when two periods had been missed. Six weeks ago, when away from home, she had a profuse loss which was taken to be an abortion. Since then she has suffered hypogastric pain, not so severe as to confine her to bed; at times there have been difficult micturition and constipation. She has had an attack of jaundice, now passing off; no marked fever or hectic. A firm rounded tumor rises to the umbilicus, defined by touch and percussion; it is continuous with a firm swelling passing into the left ilium. The os uteri is soft, a transverse slit compressed close behind or rather above the symphysis pubis; behind the cervix is a large rounded firm but not hard swelling filling the brim of the pelvis, and partly projecting into the cavity, depressing the roof of the vagina; this is also felt *per rectum;* it is more developed in the right ilium. The sound gently curved passes three and a-half inches to the fundus of the uterine tumor, by directing the point well forwards round the symphysis towards the umbilicus. The uterus, therefore, is in

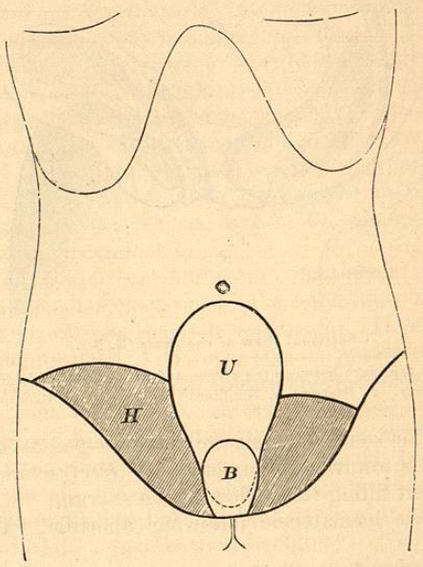
front, enlarged, and is insulated from the larger mass behind it; the uterine neck is pushed forwards and upwards against the pubes by the swelling, and the body of the uterus is carried upwards so that it is lifted quite out of the pelvis. Hence the apparent large size of the uterus, which seems to be as great as the uterus at four months' gestation.

Diagnosis: retro-uterine hæmatocele; hemorrhage beginning with abortion. Prognosis favorable. Treatment: rest.

The extra-uterine mass gradually disappeared, the uterus recovered its normal size, position, and mobility.

The condition of things is indicated in Figs, 109 and 110, constructed at the time the case was under observation.

Fig. 109.



Retro-uterine Hæmatocele (R. B.).

U, the enlarged uterus lifted up and pushed forwards by H, the retro-uterine hæmatocele. B, the bladder.

The following is another case in which a discharge of blood *per rectum* confirmed the diagnosis:—

Abortion—Retro-uterine Hæmatocele—Recovery.—On the 6th October, 1868, I met Mr. Garman, of Bow, in the case of Mrs. C. B., aged thirty-four, who had one child fourteen years before. Has had several abortions. At the time of my seeing her she seemed to have recently aborted; the uterus was three to three and a-half inches long; cervix patulous; some hemorrhage; the sound penetrated in normal direction.

November 1*st.*—We met again. Within the last week there has been rapid increase of abdomen; sense of weight and forcing forward of womb upon the pubes; pulse 90; no marked abdominal pain, but there is a solid mass the shape of the uterus rising to the umbilicus; dulness on