PUDENDAL HEMATOCELE.

BY

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THIS affection has been known under a variety of names. It has been designated hematocele of the vulva, hematoma of the vulva, thrombus of the vulva, varicose tumor of the vulva, etc., etc., by different authors. The name at the head of this paper was first employed by McClintock, and, in the opinion of the author, it is to be preferred to the others, inasmuch as it is concise and explicit, both as to the seat and the character of the accident. The disease was recognized and described so long ago as 1524 by Rueff, of Zürich.

As indicated by its various appellations, the disease is a bloody tumor of the vulva, or rather an extravasation of blood into the pudendal tissues. The disease may be divided into two great classes, according as it occurs in the pregnant or non-pregnant condition. When it occurs in the non-pregnant woman, whether she be a virgin or a woman who has already borne children, it is *always* of an *extraneous* traumatic origin. It can, of course, also occur traumatically in a pregnant woman, but among this class it most usually happens during the process of parturition. Strictly speaking, these latter cases are also traumatic, but in this paper I desire to limit the use of the word traumatic to those cases of pudendal hematocele which are produced by violent causes external to the patient, and entirely disconnected from pregnancy.

It is but recently that two cases of traumatic pudendal hematocele, in rapid succession, fell under my notice; one case occurring in a virgin and the other in a lady who had already borne one child. I subjoin the clinical histories of both of these cases.

CASE I.—On December 3d, 1883, I was called to see Mrs Fl., æt. thirty-two years, married, and the mother of one child. She gave the following history. She was standing upon a high-backed chair, in order to reach for something on an upper shelf. She had her arm outstretched, when she lost her balance, the chair

suddenly lurched, and she fell backwards, with very great force, upon the back of the chair, violently striking the pudenda in her descent. She at once suffered acute pain, and an enormous swelling presented itself in the left labium majus, including a portion of the labium minus, and extending down from about the clitoris to the perineum. It gradually enlarged, until it was equal in size to a small fetal head. I saw her within fifteen minutes after the accident, and advised the use of ice-cold compresses and bandage, with an evaporating lotion added to the ice-cold water.

Inasmuch as the tumor was of such large size, I considered that absorption of its contents would be most improbable; and to wait till suppuration should be established, before evacuating the sac, seemed to me to involve too much risk and danger from absorption of septic matter which might be generated in the extravasation. Hence I thought it most judicious to incise the tumor at the earliest moment which would admit of safety, as regards the cessation of hemorrhage into the sac. In accordance with this plan, on the fourth day after the occurrence of the accident I made a free incision in the sac, turned out all the loose clots, and washed out the cavity with a disinfectant solution. I then introduced a certain amount of powdered iodoform into the cavity, and applied a firm compress of carbolated absorbent cotton to the wound. The wound was irrigated with antiseptic solutions each day. For about a week, the dressing was continued, as it had been applied in the first instance, and by the end of which time the wound had completely healed.

CASE II.—On December 29th, 1883, H. M., æt. twenty-four years, unmarried, domestic, whilst engaged in her household duties, fell forcibly backwards and struck the back of a low chair behind her in such a manner that her thighs became engaged on either side of the chair-back, hitting herself violently in the vulvar region. She immediately suffered great pain, which continued for some time, and was only relieved by opiates. Simultaneously, an enlargement was developed in the left labium majus of about the size of a goose egg. It was very tender and soft, and of a bluish color. Ice-cold water affusions were ordered to be applied to the tumor with a firm bandage. It did not grow any larger. After a week had elapsed, no indications of absorption could be detected, whereupon hot fomentations were advised, in order to encourage suppuration in the sac. Suppuration was soon established, and in about one week later, while the patient was making some muscular exertion, the swelling suddenly burst spontaneously. After it had been evacuated, the cavity was thoroughly cleansed with disinfectant lotions for the next two weeks, at the end of which time it had completely healed.

In both of these cases, the healing process was very much facilitated by the natural contractility of the parts involved.

Of the various authors, each devotes a different degree of

attention to this malady. Some ignore it altogether, others pass it by with a short paragraph, and a few only describe it somewhat at length.

Etiology.—Because in pregnant women the venous circulation in the lower portions of the body is interrupted, and because at the same time a dilatation and a thinning of the walls of the blood-vessels occurs, one would be apt to conclude from *a priori* reasoning that the pregnant woman would be specially predisposed to this accident. A few writers hold to this view. It has, however, been proven, and the fact has been corroborated by nearly all writers on obstetrics, that the occurrence of pudendal hematocele even in the pregnant woman is rare, and it is not to any material extent favored by the anatomical and physiological changes which the parts in question undergo during gestation. Statistics also bear testimony in the same direction, for, if the circulatory changes of pregnancy specially predisposed to this accident, we ought to meet with it very frequently, in fact much oftener than we do. Yet all who practise obstetrics to any great extent must acknowledge that, even in a large number of cases, they have met with it quite infrequently. Further on in the course of this paper, I shall submit some figures which will sustain the position here assumed that the circulatory changes accompanying pregnancy do not necessarily predispose to pudendal hematocele. Here, like everywhere else, those cases which do occur as complications of pregnancy and parturition are but the exceptions which prove the rule.

It is very rare indeed in the earlier months of pregnancy. It occurs usually during labor or after delivery, and especially just as the presenting part is about to clear the vulva. In these cases, a large child, a narrow pelvis, a delay at the inferior strait with the subsequent exertions to overcome the impaction, may each be an immediate cause of the catastrophe. The abuse of the forceps in unskilled hands has been a cause at times. Lawson Tait mentions a case in which the forceps slipped at least twenty times, the parts were frightfully mangled and macerated, and the vulva was infiltrated with an extensive blood clot. The parts took on sloughing and in a few days the patient died.

[1] Diseases of Women, by Lawson Tait, F.R.C.S., etc. W. Wood & Co., 1879, page 19.

As a complement to the two cases of extraneous traumatic pudendal hematocele previously narrated, I will take the opportunity to introduce in this connection the histories of two cases illustrative of this affection when it occurs as a complication of the puerperal state.

CASE III.—Mrs. L. F. was taken in labor March 1st, 1881, and was attended by an ordinary "midwife." During the progress of the labor the right labium majus became swollen to the size of the fetal head at full term. The midwife became alarmed and sent for me. I, however, was absent from home, and the case was referred to Dr. A. M. Jacobus. Dr. Jacobus saw the patient and attended her, and to him I am indebted for this history of the case. I will quote from the notes furnished me by Dr. Jacobus. "There was no history of previous local injury or trouble. As the labor pains became stronger the swelling became discolored and very hard. By this time the vagina was so nearly occluded that the labor was interfered with and very much delayed. Upon my arrival (the pains seemed to have become stronger) the head had descended and, by its great pressure upon the swelling, had caused the rupture of the tumor. The discharge was sanguineous in character. The child was then speedily delivered *per vias naturales.*"

CASE IV.—Mrs. B., æt. thirty-three years, was confined of her sixth child on February 23d, 1884. She had strained much at labor. Shortly before the child was born, a swelling showed itself in the vulva on the right side, involving both the labium majus and the labium minus. It grew to the size of a small orange. The patient suffered striking pains in that region. The tumor interfered very much with micturition. On the third day the swelling became livid and showed signs of ulceration on its most prominent part. Warm fomentations were used and on the fourth day the sac discharged itself spontaneously. The contents consisted mostly of decomposed blood and but very little pus. The case was then treated with antiseptics and iodoform, similarly to Case I. Complete recovery was established in four days afterwards.

In the extraneous traumatic cases, direct violence to the parts, as blows, falls, kicks, violent attempts at coitus, as in rape, are usually the causes of the disaster. My friend, Dr. Leale, related a case in which the injury was produced in a singular manner. The patient was gored by the horns of a cow in the pudendal region, causing a complication of wounds, among others pudendal hematocele and hernia. The patient many years after died in consequence of strangulation of this hernia.

As the vulva is so largely made up of areolar tissue, it offers

very little resistance and hence extensive bleeding results. It appears that in the majority of cases the left side is affected. In the opinion of the author, this is but a coincidence, for no special reason exists, so far as he could determine, why the accident should have a predilection for one side rather than the other.

Symptoms.—When the accident happens, a sudden sharp pain is experienced, with the instantaneous development in the pudenda of a large and growing tumor. This swelling is, of course, the effusion of blood into the surrounding tissues, which may in rare instances continue until the dissolution of the patient occurs. Usually the labium majus only is involved, though it has been seen in the labium minus, as in two of my cases. It has even occurred symmetrically in the labia on both sides of the vulva. It has extended to the space between the superficial and middle fascia of the perineum. Cazeaux[1] cites a case in which the extravasation extended into the right hypochondrium to the false ribs and to the attachment of the diaphragm. It may also press on the neck of the bladder or upon the rectum, thus causing retention of urine or feces. It varies in size from that of an egg to that of a fetal head. The hemorrhage may be venous, or arterial, or both. The ruptured vessel is usually seated in the lower part of the vagina and less frequently in the vulva.

Pain may sometimes be absent, though very rarely indeed. The vagina may be scarcely patulous from the large size of the effusion.

The most frequent point of spontaneous rupture is at the junction of the larger and smaller labium. Sometimes when a rupture occurs a fistulous tract may result. Pudendal hematocele also frequently accompanies the complete rupture of the uterus and vagina.

Diagnosis.—The diagnosis of pudendal hamatocele is easy. The sudden nature of the affection is generally sufficient to distinguish it from edema or abscess of the labium, from pudendal hernia whether of omentum or intestine, and from inflammation of the vulvo-vaginal glands, or from other local

[1] A Theoretical and Practical Treatise on Midwifery, by P. Cazeaux, revised by Tarnier, 1878, page 689.

troubles. It must also be differentiated from varix of the vulva and vaginal cystocele.

It is by no means a common affection, in fact it is quite infrequently met with. This statement applies more particularly to those cases having an *extraneous* traumatic origin.

Prof. T. G. Thomas, of this city, in a recent edition of his book on "Diseases of Women,"[1] says that "in an extensive special practice of twenty-seven years he had met with only four cases of pudendal hematocele of a traumatic origin in the non-pregnant condition."

Velpeau,[2] however, states that he has seen six traumatic cases in the non-pregnant woman in the course of one year, which is, indeed, a very remarkable experience.

Scanzoni[3] observed fifteen cases occurring during the course of labor—eight before the child was born, six during the delivery of the placenta, and one in the interval between the births of twins.

Playfair[4] remarks that various French authors have collected one hundred and twenty-four cases, of which forty-four proved fatal.

But two cases (extraneous traumatic) of pudendal hematocele were reported among all the recorded cases under treatment at Bellevue Hospital during a period of seven years, from 1876 to 1883, and both of these occurred in the latter half of the last year. The tumor in each case was as large as an egg. One was produced by a kick, and the other by a fall astride of the edge of a pail. One of these cases was treated with hot fomentations from the outset, and was finally opened, discharging a sanguineous purulent material. The other was immediately evacuated. During the same period of time, but a very few cases were treated in the hospital which had any connection with the parturient state. These cases occurred during the services of Drs. Fuller and Lewengood, of the house staff, and to them I am indebted for these figures.

In a continuous series of six hundred and forty-six obstetrical cases in my own practice, covering the period of the last

[1] Diseases of Women, ed. 1880, page 132.
[2] Diseases of Women ; Thomas, 1880, loc. cit.
[3] Puerperal Diseases, Prof. Fordyce Barker, 1878, page 55.
[4] Playfair's Midwifery, edited by Harris, page 357.

nine years, I met with this accident only once. This *one* case is Case IV. reported in this article.

Dr. E. F. Ward,[1] in a practice of two thousand obstetrical cases, *never* met with it. In a recent private communication to the author, Dr. P. F. Mundé writes that he has seen but two (2) cases of pudendal hematocele occur among three thousand labor cases. One case was conjointly external and pelvic in a primipara. Dr. Mundé has never seen a case of pudendal hematocele in the non-pregnant woman.

These statistics I referred to in a previous page, as confirmatory of the fact that the changed condition of the circulation in the lower portions of the body of the pregnant woman does not specially predispose to this accident.

Prognosis.—The accident is less dangerous in the non-pregnant than in the pregnant woman. At one time, it was considered as a very unfavorable and almost fatal complication. Suppuration or decomposition of the contents of the sac may take place in the effused blood, and, if not promptly evacuated and properly treated, auto-sepsis may take place from the absorption of the contents of the tumor. This is more likely to happen in the pregnant condition. Improved methods of treatment at present in use have reduced the large mortality which formerly seemed to attend this affection, particularly in connection with the parturient state.

The amount of blood effused may be so great as to cause collapse of the patient. Deveux reported twenty deaths in sixty cases, Winckel six deaths in fifty cases, Barker two deaths in twenty-two cases, and Scanzoni one death in fifteen cases.[2]

Prof. Barker[3] reports nine cases in private practice, all resulting in recovery. Of thirteen hospital cases, two died of puerperal fever.

Hewitt narrates a case which Mauriceau mentions, in which a blood tumor had existed for twenty-five years in the left labium majus, which, on being opened, gave issue to matter like the contents of an aneurysmal sac.[4] This is, indeed, a

[1] Minutes of Discussion of North-Western Med. and Surg. Society, vol. ii., page 118.

[2] The Science and Art of Midwifery, W. T. Lusk, A.M., M.D., etc., New York, 1882, page 580.

[3] Puerperal Diseases, by Prof. F. Barker, 1878, page 60.

[4] Hewitt's Diseases of Women, vol. ii., page 418, edited by H. Marion Sims, N. Y., 1883.

very exceptional case, and I believe the only one of the kind on record.

Pudendal hematocele is very variable in its course and ter mination. It may end by resolution or absorption, like a thrombus in any other situation. Especially when it is small, it may disappear spontaneously by absorption, or else the clot may become encysted, remaining innocuous in the tissues for an indefinite length of time.

Treatment.—As regards treatment, there seemed to be some diversity of opinion among authors, for the directions laid down by them are not uniform, yet a general rule of procedure can be deduced therefrom. In both of my traumatic cases, I was in the outset, from lack of experience, at a loss how to treat them; I became only more perplexed after I had consulted the views of various authors, and I finally decided to act as I did in the cases mentioned.

Of course, it is a well-settled principle in surgery *never* to incise a recently-formed effusion of blood, lest uncontrollable and fatal hemorrhage ensue. Hence, when seen early, or when effusion of blood is still going on, our efforts should be directed to the arrest of the hemorrhage, by the application of cold and pressure. As already stated, small effusions may become absorbed or encysted, and all the treatment required in these cases is to keep the patient quiet and to apply evaporating lotions with pressure. A good method of applying internal pressure in these cases is that suggested by Prof. Lusk.[1] It consists of this: A rubber bag or a large Barnes' dilator filled with iced water should be adjusted in the vagina, and then, by the double action of cold and pressure, the hemorrhage may be checked. Opiates may be given to relieve pain.

In those cases in which the effusion is so large that absorption is improbable, it will be necessary at some time in the history of the case to incise the tumor. If we wait till suppuration shall have set in, we will run the risk of sepsis. Hence it seems to me that, after waiting a reasonable time after the occurrence of the extravasation, and when we think that the hemorrhage has ceased, it is preferable to incise the tumor,

[1] Science and Art of Midwifery, by W. T. Lusk, A.M., M.D., etc. N. Y., 1882, pages 580 and 581.

clear out the clots, wash out the resulting cavity with an antiseptic solution, and make use of iodoform with firm pressure.

If the bleeding should continue, however, after thus incising the swelling after a reasonable period of time shall have elapsed, then the bleeding vessels should be secured by ligature. It has even been recommended to apply the thermo-cautery to the bleeding cavity, after the swelling has been opened in order to arrest the flow of blood.

If the effusion occur during labor, and it be sufficiently large to impede the birth of the child, it is proper to make a free incision at the most dependent part, and the advancing portion of the child will act as a tampon to control the hemorrhage. If it occur before the presenting part has descended, pressure must be applied. If it form after the birth of the child, it should be treated as one of an extraneous traumatic origin. At whatever period the incision may be practised, it is not advisable to remove all the clots at first; leave those which seem to adhere, and they will gradually come away with the subsequent dressings. The incision should be free and not merely a puncture and after the clots have been extracted the natural contractility of the parts will cause the wound soon to close up. As regards the part of the tumor where we are to operate, we must always be guided by the fact that it is necessary to secure free drainage from the wound. Hence it should always be opened at its most dependent part, even if there should be indications of pointing elsewhere. It is usually preferable to cut on the inner or vaginal side of the labium majus.

If, when the effusion is small, no sign of absorption occur after a reasonable period of time, then it will be proper to employ hot poultices to encourage suppuration, and as soon as pointing takes place, the pus should be liberated. The discharge will sometimes emit a distinctly stercoral odor which might possibly lead to the erroneous opinion that the hematocele is complicated with a recto-vaginal fistula. It has been well demonstrated by surgeons that, in abscesses near the rectum, it is quite usual, without any communication being present with the intestines, for the purulent matter to possess a fecal odor.

Since the great mortality in former times was most probably due to septic infection from absorption of the purulent and de-

composing sanguineous constituents of these effusions, it is very necessary and important that the antiseptic method should be rigidly carried out in the frequent irrigations of the cavity with disinfectant lotions, preferably of the bichloride of mercury 1 part to 2,000, or of phenic acid of a two-per-cent strength. Then all the indications for treatment will have been met, and a favorable result may be, in very nearly all cases, confidently expected.