

HYDATID MOLE. ITS RELATION TO CHORIO-EPITHELIOMA AND CYSTIC DEGENERATION OF THE OVARIES. WITH REPORT OF TWO CASES COMPLICATED WITH ECLAMPSIA

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THE subject of hydatid mole has received renewed interest within recent years by Marchand's epoch-making studies showing the close relation between hydatid mole and chorio-epithelioma. It is especially regarding this feature of hydatid moles, that the present communication will concern itself. In addition, advantage will be taken of the opportunity to report two cases with the very rare complication of genuine eclampsia. Further, the association of cystic degeneration of the ovaries with hydatid mole will be discussed, and a few words will be devoted to the method of emptying the uterus in hydatid molar pregnancy.

The physical characters of a hydatid mole are too well known to call for description here. The finer histological formation of the vesicles has been exhaustively studied and described by Marchand and L. Frankel. Concisely stated, these observers have demonstrated that in the epithelia of the villi, we may distinguish two layers of cells, the inner Langhans cell strata, and the outer, syncytial layer. The Langhans layer proliferates deeply, in places, into the syncytial layer, and occasionally breaks through in certain places, and grows into the inter-villi spaces. The cells may also show degenerate changes, and they may then assume large, even enormous, dimensions, presenting several granules, and the protoplasm appears of a lighter colour with transparent areas.

The syncytium may also undergo a powerful proliferation and amplification of its nuclear and protoplasmic substances. Frequently the proliferation is so great that contiguous syncytial masses adhere together, forming a garland-like figure. Adjacent, is to be seen a degenerative form, which expresses itself in vacuole formations, so that frequently the syncytium takes on the appearance of a sponge with large cells. These vacuole formations, according to Marchand, are caused by hydropic degeneration, and, according to v. Franque, by the separation of the mucus from the surface of the villi.

We have, therefore, in hydatid molar pregnancy, changes that consist chiefly of a more or less marked proliferation of the cell layer and of the syncytium, which, in part, especially in the syncytium, is attended with degenerative processes leading to hydropic formations in the central parts from insufficient nutrition.

The important desideratum is that the proliferated epithelia of the villi exercise a destructive influence upon the adjacent tissues. In the larger hydatids, the decidua undergoes almost complete destruction. The so-called syncytium wandering cells, which are to be seen also in normal pregnancy, are particularly numerous, and penetrate deeply into the muscular layer and may be found there in great numbers, weeks, even months, after the hydatid mole has been expelled. Not infrequently a few degenerated villi themselves proliferate into the muscular layer and are found in the lumen of the veins, where, according to Veit, they are passively deported by the blood stream, but according to other authors, grow into the vessels by active proliferation.

The musculature of the uterine wall, in places, is very much thinned by the action of the villi, so that, in spontaneous expulsion of the hydatid mole, or in artificial removal, serious hæmorrhage may ensue, as in the cases described by Dorman, Gottschall, v. Franque, and others.

Rupture of the uterus may occur spontaneously during the progress of gestation, leading to alarming intraperitoneal hæmorrhage, as in the cases reported by Wilton, v. Franque, Jarotzky-Waldeyer, Waldo, Voigt, and Neumann. Krieger reports a case of peritonitis following such a rupture.

These cases have been designated as destructive hydatid moles. Some of them are truly malignant in character, showing that chorioepithelioma has already developed. (Cases reported by Voigt, Neumann, Solowij u. Krzyszkowski, and Gottschall.) Others, again, possess merely destructive qualities, without being malignant (cases reported, v. Franque, Waldo, and others). Marchand states that these two varieties are to be distinguished by the latter never showing atypical new tissue formation. They exhibit only a simple hyperplastic proliferation of the chorionic villi, with strong penetrating features.

Several interesting questions arise in connexion with this subject.

1. Does the ovum possess these tendencies of excessive proliferation of the chorionic villi before it reaches the uterus, or,
2. Does it acquire these only after it has reached the uterus

from the diseased condition it meets there? We have, therefore, the ovular and decidual theories.

The decidual theory, as is well known, found its first sponsor in Virchow, who attributed the formation of hydatid mole to an inflamed condition of the endometrium, which exercised an irritative influence upon the chorionic villi leading to vesicular degeneration. Warm advocates of this theory are Veit and his pupil Schoorel, who state they have found an inflamed condition not only of the decidua basalis, but also of the decidua vera. They draw the conclusion, from the associated disease of the decidua vera, that the endometrium must have been diseased before the onset of pregnancy, and not caused by the irritation of the hydatid mole, as claimed by Schwab and Maslowsky.

The decidual theory has received support from the interesting experiments by Aichel. This investigator was enabled to bring about vesicular degeneration in the pregnant bitch by tearing apart some of the vessels between the placenta and the uterine wall. A further argument in favour of the decidual theory is the circumstance that the endometrium is generally found thickened and presenting degenerative and inflamed processes.

One of the strongest and clearest expositions of the ovular theory is furnished by Van der Hoeven, in an article in the *Archiv. f. Gyn.* Bd. 62, S. 316. Van der Hoeven made an exhaustive and very painstaking study of several normal placenta of various periods of pregnancy (two from the fourth week), and of ten hydatid moles, and four cases of chorio-epithelioma. One by the hydatid moles was as early as the fourth week of pregnancy, and the remainder from the third, fourth, and fifth month of gestation.

What he has particularly observed in the hydatid mole, is the poor development of the chorionic villi and their absence at the site where they are normally present. In other words, he states that in the hydatid mole we have an ovum that has not the power to develop normal villi, and, likewise, has not the power to develop in the normal sites and at the normal period.

Another characteristic of the hydatid mole is the absence of the Nitabuch's fibrin layer, which forms the outer boundary of the ovum. The arguments in favour of the ovular theory, are, (1) one ovum may develop normally and the other may form a hydatid mole; (2) in many instances of hydatid mole there is not a trace of a foetus to be detected, showing that the degenerative process must have begun at a very early stage of pregnancy, at a time when the ovum receives but little from the uterus and is but little dependent upon it for its development.

If the non-adherence of the chorionic villi to the decidua reflexa, as occurs in hydatid mole, was due to some disease of the endometrium, then an expulsion of the ovum would take place, and not the formation of a hydatid mole. In addition to the non-adherence of the villi to the decidua reflexa for the development of a hydatid mole, there must be present an inherent tendency to abnormal growth. This tendency to abnormal growth, Van der Hoeven holds as an essential feature of hydatid mole, and, according to him, it possesses this before it reaches the uterus, either through the influence of the sperma, or on account of its own inherent characteristics.

Hydatid mole may occur in the tubes, as in a case reported by Matwejew and Sykow. The ovary on the corresponding side contained four cysts, and these the authors looked upon as an ætiological factor.

It will be opportune now to refer to the association of cystic degeneration of the ovaries with hydatid molar pregnancy. This association has received considerable attention within recent years, and has been regarded by many as a support of the ovular theory. Palmer Findley, in his collection of 210 cases, could find only eight cases with cystic degeneration of the ovaries. E. Runge, on the other hand, in twenty-eight cases, found cystic degeneration of the ovaries in twelve cases. L. Frankel states that at least 100 cases have been placed on record. He describes their gross characters as follows: They are multilocular, consisting of a honey-combed system of cysts of the average size of a walnut, with the lining of the wall presenting a light brownish or yellowish colour. The individual cysts are not held together, as in the case of the ordinary polycyst, by the firm, grayish ablutinea, but each one projects on the surface of the ovary, presenting a bluish appearance on account of the thinness of its walls. The picture corresponds with that presented by cystic degeneration of the kidneys, which the cystic ovaries resemble in shape, size, and lobulation.

Frankel reports two instances in which he has observed these cysts undergo regression, after the termination of the hydatid molar pregnancy. He finds in the literature five other instances of such regression. But some of the cases do not appear to be convincing. For example, in one of Fränkel's cases, no cystic enlargement of the ovaries was found under narcosis when the uterus was emptied of its hydatid mole, but a week later both ovaries were found to be the size of a goose egg. Three weeks still later, the ovaries were found again to be of normal size. Several cases operated upon,

months, and in one instance, two years after the termination of the hydatid molar pregnancy, showed the cysts of the ovaries to be of the same size or much larger. In only one of the four cases observed by the writer, had the ovaries developed into cysts, each the size of a closed fist. Still, it is well to bear in mind these observations, and, in the event of meeting with a case of hydatid mole with such a complication, it should not be taken off-hand as an indication for radical interference. If there are no evidences of the formation of a chorio-epithelioma, one could afford, in the light of these observations, to wait and watch the future behaviour of the cystic ovaries.

Considerable study has been devoted to the microscopic appearances of these cystic ovaries. Stöckel, Runge, and J. Jaffe, state that the walls of the individual cysts present a variously shaped layer of lutein cells, which penetrate, more or less extensively, into the connective tissue of the walls between the individual cysts.

L. Pick looks upon this excess of lutein cells as the cause of the hydatid degeneration of the chorionic villi, and further, that it may be the cause of the excessive proliferation of the trophoblasts, leading to the formation of the chorio-epithelioma. He admits, however, that the lutein cells are not found in excess in all cases either of hydatid mole or chorio-epithelioma, and that this condition can, therefore, account only for a certain proportion of the cases. In other cases he thinks the presence of the cysts exercise undue pressure upon the corpus luteum, thus interfering with its function of presiding over the normal development of the ovum.

Baumgart is of the opinion that the ovarian tumours cause disturbances in the circulation of the endometrium, and this in turn causes cystic degeneration of the ovum. Thus we see that the associated disease of the ovaries may be used also in support of the decidual theory. We are, therefore, still in the region of theory regarding the ætiology of hydatid molar pregnancy.

Nephritis and albuminaria and its attendant œdema are frequent complications of hydatid mole and occur in about 19 per cent. of the cases, according to the statistics of Dorland and Gerson. But the occurrence of eclampsia is very rare in true hydatid molar pregnancy, that is, in cases in which there is not a trace of a foetus to be found.

A fairly thorough search of the literature has disclosed only three cases. One reported by Hitschmann, in a woman eighteen years of age, II para, in the fifth month; one by Krømer in a patient thirty years of age, III para, in the fifth month; and one

by Sitzenfrey in a patient twenty-two years of age, I para, in the sixth month of gestation.

It is singular with such a rarity of the complication, that the writer should have met with two cases within the past five years. Both were in primiparæ. The first patient was twenty-five years of age and in the sixth month of pregnancy; the second was eighteen years of age, between the third and fourth months of gestation, in whom the eclamptic seizures developed a few hours after hysterectomy, for hydatid mole and double cystic ovaries. It was in this case that the removed uterus showed the presence of chorio-epithelioma.

The reasons assigned for the rarity of eclampsia, are: (1) hydatid mole is more frequently met with in multipara, while eclampsia is more often seen in primipara; (2) eclampsia is very rare in the early months of gestation, the period at which hydatid molar pregnancy is observed. For instance, in 342 cases of eclampsia observed by Schauta, not a single case had occurred as early as the fourth or fifth month. Fehling, in a collection of 516 cases, found only five cases as early as the fifth month, and according to Hitschmann, some of these cases are doubtful.

A further interest besides rarity attaches to these cases of eclampsia in hydatid molar pregnancy. They demonstrate with the accuracy of an experiment that eclampsia may occur without foetal metabolism.

The close relationship between hydatid mole and chorio-epithelioma was first established by Marchand in 1895. Prior to that, Sænger had described a malignant growth which he termed deciduoma malignum. At the present time Marchand's views are generally accepted.

The frequency with which hydatid mole is followed by chorio-epithelioma has been variously stated by different writers. For instance, Bumm in his text-book places it at 15 per cent., Palmer Findley at 16 per cent. On the other hand, in twenty cases observed at the Kiel Klinik, only two were followed by chorio-epithelioma. Kehrer followed up the history of fifty cases of hydatid mole and did not meet with a single instance of this complication. L. Frankel met with only one case in fifteen cases, whose subsequent history he had observed. The writer has met with an unusually large number of cases with this complication within the past four years; of eight cases of hydatid mole that came under his notice during that time, three were attended or followed by chorio-epithelioma.

It is difficult to ascertain with any degree of accuracy the proportion of cases of hydatid mole that are followed by chorio-epithelioma, because not all cases of hydatid mole are reported. Chorio-epithelioma, on the other hand, being a comparatively newly-discovered disease, will generally find its way into the literature.

For these reasons the reverse relationship, the frequency with which chorio-epithelioma is preceded by hydatid mole, admits of a fairly accurate expression. This has been found by a recent collection of the reported cases to be in the neighbourhood of 50 per cent. (Eiermann). The significance and importance of these statistics are obvious. Hydatid molar pregnancy can no longer be looked upon as the innocent affair it was considered in former years.

Have we any reliable means of determining in a given case of hydatid mole, whether it be of the benign or malignant variety? In other words, can we tell when we are dealing with a case whether it is going to be followed by chorio-epithelioma or not? The consensus of opinion of nearly all writers is that we cannot.

Van der Hoeven asserts that every case of hydatid mole has the inherent characters of malignancy, such as excessive proliferation, invasion of adjacent tissues, and metastatic formations, but that fortunately in the majority of cases, nature is able to take care of the products of such activity after the expulsion or removal of the hydatid mole. In a certain number of cases, however, for reasons unknown to us at the present time, the process goes on after the termination of the pregnancy leading to a growth with all the characters of malignancy.

This leads us to the treatment of hydatid molar pregnancy. From time immemorial it has been agreed that a hydatid mole should be removed, or its spontaneous expulsion favoured, as soon as the diagnosis is established. But it is as to the method of removal that I would like to bespeak your attention.

We all know how unsatisfactory it is to empty a uterus of a hydatid mole with a curette or placental forceps, even when aided with the fingers in the uterus. The procedure, in addition, is not devoid of risk from excessive hæmorrhage or from perforating the uterus. Dorman reports a case of death from hæmorrhage and shock. Similiar cases are found in the literature. H. Freund relates three instances in which he had to do an abdominal Cæsarean section, owing to profuse hæmorrhage.

I was lead by chance to a procedure which I deem of great value. One of my cases (Case I) was a primipara, pregnant

about five months, suffering from eclampsia and comatose, with a tightly closed cervix. I was desirous of emptying the uterus as quickly as possible. I decided, therefore, to do a vaginal Cæsarean section, although I was not aware I had to deal with a hydatid mole. I was enabled, thereby, to pass my entire hand into the uterus and shell out all the vesicles with such ease and precision, and with so slight a loss of blood, that I was greatly impressed with the advantage of the method in all cases of this abnormality. The patient made a rapid and satisfactory convalescence. I would consequently recommend it as the routine procedure in all cases of hydatid molar pregnancy. The superiority of the hand over any instrument in removing all the contained vesicles can only be fully appreciated by the actual experience. The further advantages of the hand are that we are enabled to palpate every portion of the interior of the uterus and may thus detect any malignant growth in its incipiency. Further still, having had our hand in the uterus, we can make certain of removing every vestige of the vesicular formations, and, perhaps in this way do a good deal to prevent the subsequent development of chorio-epithelioma.

Should this claim appear chimerical, we are at least placing ourselves in a position to be able to detect the development of the malignant growth at its earliest manifestation. For, after such a thorough and certain emptying of the uterus of the vesicles, should any hæmorrhage subsequently occur, I think one could safely assume that chorio-epithelioma had developed. Personally, I would not hesitate, as I have done in two of my cases, to make the diagnosis on that basis. There is one feature about the hæmorrhage attending a chorio-epithelioma that is almost pathognomonic, and that is its profuseness. In one of my cases (Case II) in which the hæmorrhage recurred three weeks after the removal of the hydatid mole, when examining the patient, the blood poured out in such a large stream from the uterus that I was afraid the patient would bleed to death on the examining table. In another case, the patient while in the hospital awaiting the usual operating day, became so exsanguinated one night from sudden uterine hæmorrhage that she had to be given an intravenous saline infusion. No other condition that I know of, certainly not the ordinary case of retained placental residue, will give rise to such alarming hæmorrhage. Consequently, after having made certain of emptying the uterus thoroughly of all the vesicles, should profuse hæmorrhage occur within a few days, weeks, or months, I would feel warranted in diagnosing chorio-epithelioma, and in proceeding with radical

measures, without subjecting the patient to a curettage and submitting the scraped tissues to a microscopic examination, as is generally recommended. In so doing I would feel I was saving valuable time and probably protecting the patient from a considerable loss of blood. But more important still than these two desiderata, would, to my mind, be the conviction that the clinical evidence thus presented would be more reliable than that obtained by the pathologist. I have a vivid recollection of the sacrifice of one of my patients through the misleading character of the pathologist's report, which was to the effect that the scraped material showed evidences only of placental tissue, although I had already made a clinical diagnosis of chorio-epithelioma. The case has already been reported in full elsewhere.¹

This is not said in any spirit of carping criticism of the pathologist, but merely for the purpose of emphasizing the unreliability of the microscopic evidences obtained from the examination of the tissues removed by the curette. The only difference between ordinary placental residue and the growth known as chorio-epithelioma, is the manner in which the latter invades the musculature of the uterus. Now, if the curette should bring away only the growth that projects above the surface of the muscular layer, as would very likely be the case, there would be no criteria by which the pathologist could differentiate between the malignant growth and the ordinary placental residue. Holding these views, I cannot agree with the advice given by some writers that every case of hydatid molar pregnancy should be curetted ten days after the termination of the pregnancy to ascertain whether chorio-epithelioma is forming.

How are we to proceed in the event of hæmorrhage, of more or less severity, occurring in those cases that we ourselves have not attended, and, when we are not certain that all the products of the hydatid mole have been expelled or removed? If the hæmorrhage be exceedingly profuse, corresponding in severity to that I described as occurring in two of my cases, I think we could safely assume the presence of a malignant growth. But if we wished to make more certain of our ground, the uterus could be dilated or the cervix incised so that we could explore the cavity with the finger. I deem the evidences to be obtained in this manner as very valuable, for the physical characters of chorio-epithelioma differ very markedly from those of placental residue. The chorio-epithelioma growth is sessile, harder to the touch than placental residue, and presents marked infiltration at the base. Frequently

the finger will detect ulceration on the free surface, and the growth will then present a crater-like formation. In order to be more thorough in the collection of our data, the curette should be employed and the scraped tissue submitted to microscopic examination by a competent pathologist. The microscopic findings, if negative, should be weighed cautiously, bearing in mind their uncertainty from the nature of the condition.

It would seem to us from the foregoing, that it behoves us to look upon every case of hydatid molar pregnancy with suspicion; that, if there be no evidence of malignancy at the time of the pregnancy, the case ought to be watched carefully for months and even years afterwards (as cases have been reported as occurring even after three or four years), for any manifestation of the chorio-epithelioma. Most of the cases in the literature have occurred before the fourth month. In the writer's two cases, only three weeks elapsed between the emptying of the uterus and the development of the growth. The first symptom of such a growth is hæmorrhage, which may be of most alarming proportions. But on the other hand, the bleeding may be moderate. In either event, no time should be lost in investigating the case by all the means at our command.

We have learned that not all cases of chorio-epithelioma show an equal degree of malignancy. The literature contains not a few cases in which there were evidences of metastases, even in the vagina and probably in the liver and lungs, that recovered without operative interference (L. Pick, Langhans, Horrmann, v. Franque, Noble, and others).

But as we have no means, up to the present time, of determining whether the growth will manifest weak or strong malignant character in the future, the only safe course to pursue, it would seem, would be to do a radical operation as soon as the presence of the growth is established.

Of the writer's three cases following hydatid mole, two were operated upon four years ago; one patient is in good health at the present time; the other was lost sight of shortly after leaving the hospital, when she was fully convalesced. The third patient (Case IV) was operated upon five months ago. A couple of weeks after her discharge from the hospital, a small bleeding growth appeared in the vaginal scar. Suspecting a recurrence I excised it, but the pathologist could not detect any evidence of chorio-epithelioma in it. I saw her yesterday, May 8th, 1911. She was in excellent health and the vaginal vault was smooth and perfectly healed.

Case I. Hydatid mole without foetus. Eclampsia. Recovery. G. S., aged twenty-five years, married six months. Nullipara. Admitted into Mt. Sinai Hospital August 14th, 1906. Had not menstruated since marriage. Pregnancy seemed to be progressing normally, until three weeks before, when she noticed that her hands and feet had swollen considerably and that her urine was diminished in quantity. On the evening prior to admission, she was seized with severe headache, and a few hours later had a convulsion. She had seven more convulsions during the night. When she reached the hospital at 9 a.m. next day, she was comatose, could not be roused, had divergent strabismus, and all the extremities were very much swollen from œdema. The urine became almost solid upon boiling and on the addition of nitric acid, and contained numerous hyaline and granular casts. The uterus reached to the upper border of the umbilicus, the vaginal portion was of normal size, and the os tightly closed. There had been no bleeding or staining.

Desirous of emptying the uterus as rapidly as possible, I incised the cervix, pushing up the bladder as I did so, until I could enter the uterus with my entire hand. I found it filled with the characteristic products of a hydatid mole, and was enabled to empty the uterus rapidly and easily of all the vesicles with comparatively little loss of blood. Exploration of the uterine cavity with the hand afterwards detected nothing abnormal. No trace of a foetus was found. The patient's condition showed improvement within the next twelve hours and she had no further convulsions, consciousness was restored, and the nephritic condition rapidly improved. On the fifth day of the convalescence she developed signs of pleuritic effusion on the left side. Later on she was transferred to the medical service, where she completely recovered from her pleurisy.

January 14th, 1907. Patient called to see me. She was in good health, urine normal, uterus well inverted. May 15th, 1911. Patient called at my request. Since the above she has had two miscarriages, one at four months, two years ago, and the second one at two months, two months ago. She has otherwise been quite well. All that I could find locally was a rather deep tear in the anterior lip of the cervix. Her urine was normal.

Case II. Hydatid mole followed by chorio-epithelioma. Hysterectomy. Recovery.²

Mrs. E. R., aged forty-seven years, married twenty-six years. VIII para. Youngest child, seven years, one miscarriage sixteen years ago.

September 26th, 1906. Last menses, November 10th, slight bloody flow. Bleeding persisted until January 9th, 1907, when uterus was emptied by me of a hydatid mole, which distended the uterus to midway between umbilicus and ensiform cartilage. There was no trace of a fœtus. For some weeks prior to this, the patient suffered from dyspnœa, marked general œdema, and albuminuria with hyaline and granular casts. Prompt and rapid improvement of all symptoms occurred after the emptying of the uterus.

February 1st, 1907. Sudden profuse uterine hæmorrhage, necessitating packing of the vagina. Two days later another attack of profuse bleeding causing marked exsanguination. Clinical diagnosis, chorio-epithelioma.

February 14th. Abdominal panhysterectomy. Satisfactory convalescence.

Pathological report, chorio-epithelioma of the uterus, ovaries not cystic. Marked proliferation of the lutein cells, many of which contain large granules of yellowish pigment.

May 8th, 1911. Heard from patient. She is perfectly well, and has good colour. Urine normal.

Case III. Hydatid mole followed by chorio-epithelioma. Hysterectomy. Recovery (abstract³).

Mrs. G. H., aged forty-seven years, married twenty-eight years. II para. Youngest child, eight years. Two miscarriages, last one nine years ago.

February 25th, 1907. Cured by Dr. F. Krug for hydatid mole, which distended the uterus to midway of umbilicus. There was no trace of a fœtus. For ten days prior to this she had more or less uterine bleeding which set in after an amenorrhœa of six weeks. Prompt recovery after curettage, and discharged from hospital March 3rd.

Re-admitted March 28th, 1907, for metrorrhagia, which set in a day or two after her leaving the hospital. The uterus was found to be enlarged to the size of the organ at the sixth week of pregnancy. Clinical diagnosis, chorio-epithelioma.

March 30th, vaginal hysterectomy by the writer. Rapid convalescence.

Pathological report: Specimen consists of uterus and adnexa. Uterus enlarged, 11 x 9.5 x 5 cm. Wall measures 17-30 mm. in thickness. Occupying the posterior wall, and extending downwards from the fundus for a distance of 48 mm., there is a growth which fills up and slightly distends the uterine cavity. On either

side the growth extends to the openings of the Fallopian tubes, elevating the mucous membrane and causing it to slope downwards to the opening. The tumour is sessile. Its edges are overhanging, except at the upper half. The surface of the tumour is irregular and ulcerated, and microscopic section shows it to be chorio-epithelioma malignum.

Case IV. Hydatid mole. Chorio-epithelioma. Double ovarian cysts. Hysterectomy. Post partum eclampsia. Recovery.

Mrs. S. C. was referred to me by her physician, Dr. J. S. Diamond. Aged eighteen years; married fifteen months; menses at fourteen years, four weekly type; duration three to four days; amount moderate, not with any great pain.

Six months after marriage she went two weeks overdue and then began to bleed. She was supposed to have a miscarriage and was curetted. Her menses were regular after this for four months and then ceased for two months, when she began to bleed irregularly, at first scantily and later rather profusely. When she consulted me the bleeding had been going on for about two months. She was pale, sallow, and looked very ill. The uterus reached up to the umbilicus and was rather tense. The cervix was closed. Behind the uterus lay two irregularly shaped cystic masses, each about the size of a closed fist. The urine contained albumin and numerous hyaline and granular casts. There was no œdema. The diagnosis was made of an abnormal pregnancy with double ovarian cysts.

November 22nd, operation. Finding, on attempting to empty the uterus, that it contained a hydatid mole, and in view of her having both ovaries cystic, I decided to perform a panhysterectomy, which I did, removing the cervix also. The operation offered no unusual difficulties and consumed about an hour. The patient stood it very well. At five o'clock the next morning, twelve hours after the operation, the patient was seized with a severe convulsion, lasting about ten minutes. This was followed by coma of twenty minutes. From this hour until 11 a.m., she had, in all, seven convulsions, each followed by coma of longer or shorter duration. The urine was very scanty, was loaded with albumin, and showed very numerous granular and hyaline casts. Her temperature had risen to 104° and her pulse was 180, very small and soft.

The patient was subjected to the usual treatment for eclampsia. In addition, phlebotomy was done. About sixteen ounces of blood were withdrawn, and colon irrigations with saline solution were given. She showed signs of improvement towards the even-

ing of the same day when the temperature fell to normal, although the pulse still remained very high (140-160). From this on improvement was steady, and on November 30th, eight days after the operation, the urine was almost normal, containing merely a trace of albumin and being free of casts.

The removed uterus on microscopic examination showed quite an area of chorio-epithelioma on the posterior wall near the fundus. The ovaries were cystic throughout and showed little or no stroma. There was no excess of lutein cells.

December 12th, patient discharged from the hospital as cured.

January 15th, 1911. She was again referred to me by her physician on account of bleeding from the vagina. I found a small vascular growth in the centre of the vaginal scar, and dotted over the posterior wall of the vagina were small flat papules about the size of a split pea and of a bluish red colour. I suspected a recurrence and had her re-admitted to the hospital. On January 19th, I excised the growth with the Pacquelin and also cauterized the papulæ on the vaginal wall. The removed growth showed no evidences of chorio-epithelioma. It was made up only of connective tissue with blood cells. The patient left the hospital January 25th.

May 8th, 1911. Patient called at my request. She was in good health, her colour had become good, and she had gained in weight. There had been no recurrence of the bleeding. The vaginal wound was healed and the entire vault was smooth and normal in appearance. The vaginal walls, likewise, presented nothing abnormal.

The case presents several points of interest :

1. The early age of the development of a hydatid mole.
2. The cystic degeneration of both ovaries with no excess of lutein cells.
3. The associate development of chorio-epithelioma.
4. The complication of eclampsia, so to speak, post partum (after the hysterectomy), in hydatid molar pregnancy with no trace of a foetus.

1. "The Surgical Treatment of Puerperal Septic Infection." *Surgery, Gyn. and Obst.*, July, 1910, pp. 30-46, Case III.
2. *Amer. Journ. Obst.* Vol. CV. No. 6.
3. *Amer. Journ. Obst.*, Vol. CV., No. 6.