ORIGINIAL ARTICLES.

THE MANAGEMENT OF EXTRA-UTERINE PREGNANCY.

Read in the Section on Obstetrics and Gynecology at the Thirty-ninth Annual Meeting of the American Medical Association, Cincinnati, May, 1888.

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The history of the management of extra-uterine pregnancy, like every other conception which has finally resulted in good to the human race, begins with very crude—I might almost say utterly empirical manoeuvres. Slowly it has emerged from its horribly uninviting chrysalis to its crawling caterpillar stage, which is almost passed, and its bright-winged life has now really begun.

Passing over without mention the mistakes and blunders of those who used to evacuate the amniotic fluid, and those who once injected substances into the gestation sac, as well as that later and better procedure, ehytrotyomry, let us go at once to the discussion of the only two methods which now receive much recognition from the medical world, which are electricity and abdominal section.

Let me state clearly and distinctly in regard to the electric current in all its forms, that I believe it wrong in principle, dangerous in practice, and frequently disastrous in its final results.

One of the assumptions of the originators of the electric treatment was that all one need do to stop the development of the gestation sac, was to kill the fœtus, believing that on its life alone depended not only the secretions of the amniotic sac, but the growth and development of the placenta. That they in reality were nothing but what their ordinary names, fœtal appendages, indicate, and that, like the nails and hair to the general body, the death of the embryo meant the immediate dissolution of all. This, however, thanks to Berry Hart, Knowlesy Thornton and Tait, we know is not true, for the placenta frequently will live on, and continue developing, long after the premature death of the fœtus.

This agrees most fully with all my studies on the endometrium, the published results of which are contained in my papers on "The Menstrual Organ," "The Endometrium in the Cycle of the Gut," and "The Infantile Uterus." The central idea that runs through them all is, that the placental matrix has an entirely separate and distinct physiological existence from all other organs, and that its function is to take up and nourish the ovum, which is done entirely independently of control from any other source than its own nerve supply.

It is true this nourishment cannot be done until the ovum is present; it is also true that the mill cannot grind without the wheat, but no one would think for an instant that the wheat controlled the movements of the mill. In the intra-uterine condition we have a totally different state of affairs from that of the ectopic form. In the latter we have the placenta developing from the adenoid layer of the tube, but we do not have it surrounded by a powerful muscular sentinel, who is ready, on the slightest indication of anything wrong, to expel the whole of the new development.

How frequently it is our experience to find signs of life in only two or three months' abortions; so much so, that it is an egregious blunder to think every miscarriage is due to some error either in the fœtus or placenta, for experience has long since taught us that repeated abortions are due as much to some conditions in the uterine wall, as they are to diseases of either the fœtus or placenta.

In extra-uterine pregnancy, however, an abortion is impossible. The placenta, once started, must go on until it has finished its physiological life, the limit of which is nine months. It is the gradual death of the placenta that causes the terrible struggles of the extra-uterine fœtus, at the close of the false labor, which, so far as the child is concerned, is nothing more or less than a slow asphyxia.

Thus I am thoroughly convinced that, to stop the growth of the ectopic gestation sac, it is necessary not only to kill the fœtus, but also to shock the pelvic sympathetic so thoroughly as to cause an interference with its control and produce what, in intra-uterine conditions, would result in a men- strual decidua. Thus, gentlemen, you see why it is that the reported cases of electric treatment of extra-uterine pregnancy are so stubborn in
their resistance, and you see the reason for the necessity of so many repetitions of those terrible doses of electricity before there is any appreciable diminution in the tension of the sac. In all probability most children are killed by the first application, but it is the placental membranes which keep up the secretion of the amniotic fluid, and it is them you must kill before any diminution can be looked for.

Thus it seems to me to be fully demonstrated that it is not the fetal, but the maternal nervous system which must be overpowered by the battery, and for this reason I believe that the whole practice is founded on a dangerous error. Another of their assumptions, from personal experience, I can assert most positively is wholly wrong, and that is as to what the so-called "premonitory symptoms" mean.

On page 293 of the Transactions of the American Gynecological Society, for 1887, you will find a discussion of this subject, introduced by our honored chairman, in which all but Dr. J. E. Janvrin concurred in the belief that the "colicky pains," and "first slight shocks," are due to contractions of the tube, or movements of the fetus. He, however, took the ground that they are due to the giving way of some structure, and that in most cases it is accompanied with haemorrhage to a greater or less degree. His speech closed the half hour allotted for the debate of papers, or I would be on record beside him. But what our President then cut me off from I here wish to say at length, and that is, that Dr. Janvrin's ideas are correct.

I have now, either as assistant or principal, officiated on about six ruptured extra-uterine pregnancies, and in every one of them we found clots of different ages. My own case, published in the Medical Record of February 26, 1887, showed this to a very striking degree, but to make sure that I was correct about the cases in which I assisted Mr. Tait, I wrote to him for information on that point, and here is his reply:

"7 THE CRES..."  
"MY DEAR JOHNSTONE:—TO my horror I have just found your letter of February 26, under a mass of papers in my desk, unanswered. It is, I find, the most fascinating occupation that gynecologists can indulge, and just in proportion to their want of experience they dogmatize on such points as this you ask information about. As a rule, there are no symptoms of tubal pregnancy sufficient to call for medical interference, or even examination, until the time of rupture. The proof of this is that, now having seen seventy cases, I have only once had occasion to make an examination before the period of rupture, and then the symptoms were those of ordinary tubal occlusion, nothing to indicate pregnancy. The next time I saw the patient the tube had ruptured. The rupture I diagnosed, but I thought it was a pyosalpinx which had burst, and caused general peritonitis. I operated immediately and found a large blood clot in the abdomen. I removed the ruptured tubal pregnancy and the patient got well.

"Now if there is anybody else with an experience as large as this who can give evidence to the contrary, we may begin to listen to him, but until such evidence appears, I think it may be reasonably supposed that the opportunities for diagnosis of tubal pregnancy, before rupture, are very rare, and the difficulties of recognition immense. In my preparations the point which you speak of is abundantly proved. There are successive haemorrhages which leave their relative dates recorded in the altered blood clots. This you saw in your own experience with me here. I don't know how you are getting on with this subject on your side, but here we are going through the stages of the old story. At first the solemn authorities stated, of course, that our cases never occurred, and now they are contradicting those of us who have had experience upon the most primitive facts of the record, utterly unable to unlearn their old notions, though following us in the new. It is very likely, of course, to be the same with you.

"I am much interested in what you say about the rush for electrolysis in your country, because here it is already exploded, and will rapidly subside into its original position of rampant quackery. You are at perfect liberty to make any use you like of this letter. Yours ever,

"LAWSON TAIT."  

This, I think, places it beyond all doubt that Dr. Janvrin is not alone in the experience which he reports. But to me it is the rule, and not the exception, that when we are first called to cases a slight rupture has already begun. But, as in the one out of seventy which Mr. Tait saw before rupture, it is almost impossible to tell whether the tube contains pus, serum, or a fetus. So, in the use of electricity, we are not only almost sure to begin its use in cases where rupture has already begun, but we can never be absolutely sure that we are not passing it through some inflammatory mass, like that case in which one of my critics deluded himself into thinking that he had absorbed the whole of a five months' gestation sac, and all in the space of three weeks. Several less lucky cases were brought out in the debate on this subject before the British Medical Association, at its meeting in 1886. Electricity was used on inflammatory masses, and instead of absorption, suppurations took place, and prompt laparotomies were all that saved the patients.

Having, as I think, pretty fully shown the errors on which its practice is based, let us turn to the immediate dangers of its use.

Fortunately, the aggregate of the cases on
which it has been tried is small, or before this we would have heard of a case of syncope, but to get it, all we have to do is to continue passing these powerful currents through the pelvic sympathetic, and sooner or later we will be sure to find a weakened heart that will not stand it. How many unreported cases like that of Dr. Janvrin the world has contained no one can tell. How many suppurations of effused blood, inflammatory masses, peritonitis, and the like, have been justly chargeable to the electric current, is a question that will probably never be solved, but from Dr. Chadwick’s and others’ experience with Apostoli’s method of managing uterine myomata, to say the least of it, it is a condition in which we would not be at all surprised at having inflammation as a result.

An extra-uterine pregnancy never occurs in a normal tube. Whether you accept the old-time doctrine, that it is always due to a tubal occlusion, or whether you take the theory that it is frequently caused by desquamative salpingitis, which strips the tube of its ciliated epithelium, laying bare its subjacent adenoid layer, which not only robs the ovum of one of its means of transportation, but exposes to its stimulation the natural placental matrix; in either case, we have the gestation sac contiguous to some old inflammatory centres.

We have long since known that weak currents have a considerable absorptive power, but we have also known that strong ones are extremely irritating. So it seems to me that he who passes the full force of a 20-cell battery through a fresh effusion of blood, among a lot of old adhesions and cicatrizes, with a possibility of a slight leakage of amniotic fluid, need not be in the least surprised to find a violent inflammation following his manipulations.

But granting that he does find his case before any blood has been effused (which remember, in Mr. Tait’s experience has occurred but once in seventy cases), to shake up the smouldering embers of an old conflagration by what is almost a caustic application seems to me, to say the least of it, an extremely daring procedure. It is true that some cases have stood it, but it is also true that pregnant women have been known to fall from the third story, and repair double fracture of both femurs, without aborting, but still we do not consider it exactly the thing to pitch them out of these windows, just to see if they can all stand it.

A case has already been recorded in which a slight rupture was the means of the diagnosis of the case, and in which, in spite of several applications of the electric battery by the best electrician in New York City, the case went on to final rupture and death. I refer to the case of Dr. Janvrin, reported in the Transactions of the American Gynecological Society for 1886, and what I believe is that, unless we stop the use of the electric battery, it is only a question of time until others will be placed beside it. Thus my reasons for believing it is immediately dangerous in practice are, that weakened hearts will not stand the currents we are forced to use, that we rarely ever find a case until a greater or less degree of rupture has taken place, and that the action of these terrible currents on the sac invites the completion of the tears, and that the risk of exciting immediate and violent inflammations and suppurations by thus roughly handling tissues which are already predisposed to them, is, to say the least of it, a very strong possibility.

But the greatest objection of all to the use of the electric current is its remote results. Before we knew anything about tubal diseases, or before electricity was even heard of, it was an established fact that a woman with a dead fetus in her belly was never out of danger; and now, after all the light that has been thrown on these troubles by the exhaustive study of the various pelvic inflammations, leaving out of sight all the invalidism which they cause, we know that, no matter how many years the mother may survive the fetus, she is never entirely free from the risk of a septic infection until she is laid away to her final rest.

Cases have been reported of the suppurations of lithopedia after years of apparent quiescence, it is true that such suppurations are very rare, but it is also true that lithopediae themselves are now a days seldom formed; many of what used to be called lithopedia we now know to be dermoid production of one sort and another, and by the more advanced methods of managing the pelvis, the errors that lead up to them in Europe are now found and corrected before they are produced, but the mere fact of one of the ultimate aims of electrolysis, being in itself a constant menace to life, seems to me goes a long way to undermine the whole practice.

Long, however, before the fetus can possibly be calcified is the greatest period of danger. Statistics, like tombstones, can be made to serve almost any purpose, and for that reason I have so far spared you, and do not now propose to inflict upon you any long tables with biased conclusions cut to fit my own ideas, but there is food for thought on this subject which I will give you in a most condensed form from a paper read before the Chicago Gynaecological Society last June, by Dr. Bayard Holmes. It is his statistics, which I especially want. He is authority for saying that “Kiwisch collected a hundred cases of extra-uterine pregnancy of all kinds, and it appears from the summary of these cases given by Bandl that about 37 per cent. of these fetuses became infected, 17 died of peritonitis, more or less acute, four died of peritonitis after the fetus had long been retained, nine died through long continued suppuration and perforation, seven recovered after spontaneous elimination. Archer collected 132 cases out of which
about 47 per cent, became infected; Parry's cases show about 28 per cent, of those which had passed full term suppurated. During the first year 12 per cent, of the whole number terminated in suppuration, during the second year 5 per cent., during the third year 2½ per cent. After this time less than 2 per cent. were infected each year. " This proves conclusively, to me at least, that while the great majority of suppurations occur shortly after the death of the fetus, and that though the ratio of deaths diminished rapidly after the so called quiescent state has been reached, still the woman must carry a constant source of danger throughout all the rest of her existence, which may explode at almost any time.

Electricians may say it is not fair to quote such statistics on us, for we never practiced electrical treatment, after the fifth month, and that it is only when the pregnancy is small, before the osseous tissues begin to take the place of the cartilaginous, that we hope to get rapid absorption.

In answer to this, though it can be easily shown that you do get suppurations, in Dr. Lusk's historic paper before the British Gynaecological Society two years ago, are two deaths of infants at five months, on one of which the electric battery had been used, both of which sloughed out. In the debate referred to on this subject, before the American Gynaecological Society last year, Dr. Chadwick, of Boston, reported another, with like results, in which the electric battery had been used, and what is stranger still, the statistics just referred to by Holmes embrace all kinds of extra-uterine gestations. One more entrenchment the electricians may take, and that is in that old exploded idea, that the safest way of getting rid of a dead fetus is by suppuration. This Lusk shows to be utter folly. So much for the absolute risks to life, but there is still another (and to me an insuperable objection) and that is the months—and even years of invalidism which this method must entail.

Now a days, when we have no hesitancy in removing incurably diseased tubes and ovaries, it seems almost like a crime, to allow a woman to carry a tube, which is not only a constant menace to her life, for months a source of pain and wretchedness, and which for years will keep her from her social duties, to say nothing of the repeated monthly congestions and second pregnancy would be almost the signature of her death warrant. Thus, gentlemen, it seems to me, that the leaving of such a condition in any stage of development, can be fraught with little but mischief to the mother, and all her associates.

I must unhesitatingly say that all extra-uterine gestations, up to the fifth month, ought to be removed through an abdominal incision, as soon as found. The very cases, which the advocates of electricity claim the most for, are the very ones which would be the most easily and safely removed by laparotomy. In proof of this I refer you to Tait's statistics, for I am sure that no other process could possibly have saved as many women, as this last method, which has almost reached perfection at a single bound.

Where a complete rupture has taken place, that is where a vessel large enough to bleed a patient to death, has given way, and which is not held in check by some rapidly adhesive form of peritonitis, not even the most enthusiastic adherents of electricity would for a moment think of using galvanism or of doing anything but following Tait's lead, and when they fully realize that the initial shocks are due to a lighter form of the same condition, I believe they would hesitate before passing their powerful currents through it.

Just on this point let me say that I believe a large proportion of the difference between Tait and his opposers is a misunderstanding in the time when the tear takes place.

Tait knows from his operative experience that the premonitory shocks are nearly always due to a greater or less degree of rupture, and acting on this knowledge, operates at once, classing all his cases under the one head of rupture.

The opposite side of the debate, though, assume that these alarming symptoms are due only to contractions of the Fallopian tube, but when they realize, what in this paper I have tried so strenuously to show, that they are in reality dealing with rupture, I believe they will find themselves not so very far after all, from the ground on which Tait has built an everlasting monument. Though leading the van, Tait is not alone in successful European work, on extra-uterine pregnancies, for Berry Hart, Martin and others have reported almost equally good results, and I am glad to say that the profession on this side of the Atlantic are waking to the necessities of the case.

Since the report of my success, cases have been reported by S. C. Gordon, of Portland, Maine; Joseph Price, of Philadelphia, Pa.; William Gardner, Montreal, Canada; G. M. Tuttle, of New York City, and Charles B. Penrose, of Philadelphia, all of which go to show that there are laparotomists in this country that can do the work successfully when they have the opportunity.

But for the exact status of the operation in the different countries, let me refer you to that most invaluable work of Greig Smith on Abdominal Surgery.

Up to the period of the fifth month, I doubt whether elytrotomy ought ever to be done, and after that time I am sure its usefulness will be extremely limited, but we may occasionally find badly neglected suppurating cases, in which we are bound to open them, at the places where they
are about to point, and this will sometimes necessitate an elyrotomy. But as the world grows wiser, I hope these purulent cases will become like vesico-vaginal fistula, and other conditions which are plainly due to neglect, an almost vanishing quantity. The results of operative interference on a viable fetus, have so far proved disheartening, and as to just what should be done with them, even our most advanced thinkers have not settled to their own satisfaction. It seems to me though, that the longer we let the placenta alone, the wider it will spread out from the centers at which it began, the more numerous its adhesions will become, and the richer will be its blood supply. It is true that a very few of these placenta reach a higher organization, and when left behind after a laparotomy are gradually absorbed. But their number is so extremely small that I do not believe we ought ever to leave them behind, where it is possible to remove them. My rule, until I see some good reason for changing it, will be in all forms of ectopic gestation, to operate, as soon as I find them, and by these means hope to give the mother the best possible chance.

Martin, of Berlin, has certainly given us, in his one successful "primary" laparotomy, a rule which I think we ought always to attempt to follow, and that is in controlling the blood supply to the placenta, we ought always to apply the ligature to the proximal, and not to the distal part of the vessel.

It is true that in some cases this would be almost impossible, but in many others we would be able to get at the broad ligaments, and thus cut off the blood current before it reaches the soft, treacherous tissue, which lies just underneath the placenta. In closing let me state that after a careful study of the subject, I am convinced that laparotomy is the only thing which ought ever to be thought of as a cure, for extra-uterine pregnancy, and that the time to operate is as soon as possible after its discovery, and if we do not use exploratory incision to clear up our doubtful cases, we are in great danger of letting our patients die without thoroughly understanding the cause of death.

When I began the preparation of this paper I thought I was almost alone in this country in the extreme ground, that a tube containing a small fetation, ought to be removed as soon as discovered without any further meddling, but I have just seen Dr. Janvrin's paper, of April 16th, before the New York County Medical Association, which shows that he, and quite a number of the younger members of the profession, are taking the same ground that this paper advocated, and speaks of two cases which have already been done by Drs. Howard, Kelly, and Joseph Price, of Philadelphia.

I do not believe the mortality on extra-uterine pregnancies, between the sixth and tenth week—where no rupture has occurred—in the hands of first class operators with the proper surroundings, would be as much as one per cent. The truth is the proper management of extra-uterine pregnancy, is still in its infancy, and is not yet free from the encumbrance with which ovariotomy had so long to struggle. It took years, I might almost say generations, for the ovariotomist to learn not to meddle with his cases, until he was ready to take them out, and they have hardly yet got past the tapping age, but when they have reached these Arcadian days when all ovarian tumors are, operated on while the patients are strong and well, by trained men, (who do not rush into it merely as a means to advance them in other branches of their practice) but who have given up to it, not only their time, their money and I might say their very souls, I hope the electric battery will have been relegated to its proper fields, and its use as a ferticide will be remembered merely as one of the transitional stages, in the developing management of extra-uterine pregnancy.

Danville, Kentucky, May 5, 1888.

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THE GREAT VALUE OF A 0.25 D. CYLINDER IN THE RELIEF OF HEADACHE AND EYE PAINS.

Read in the Section on Ophthalmology and Otology, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.

By Julian J. Chisolm, M.D., Professor of Eye and Ear Diseases in the University of Maryland, and Surgeon-in-Chief of the Presbyterian Eye and Ear Charity Hospital of Baltimore.

In the selection of cylinder glasses, there is a disposition on the part of many to ignore the lesser degrees of astigmatism, as minor eye defects not worthy of recognition. I have heard often the expression from ophthalmic surgeons, that they never prescribe less than 0.5—D. lens, and am led to the belief that a very large number of young patients are allowed to suffer with eye faults uncorrected, because of this opinion. My practice and teaching for many years has been to recognize irregular refractive faults, however small, and by so doing give great comfort. In fact, I find as the result of my own experience, that these lesser faults are often the most complained of, and that the most marked and annoying reflex troubles are occasioned by the smaller, and not by the greater degrees of astigmatism. Pain not restricted to the eyes and forehead, but extending down the spine, disturbing the stomach, and even affecting the limbs, anxious troubles which have resisted the most thoughtful care of the physician and the skill of the gynecologist, have been removed promptly by the use of a 0.25 cylinder lens.