

THE AMERICAN JOURNAL OF OBSTETRICS

AND

DISEASES OF WOMEN AND CHILDREN.

VOL. LVIII.

AUGUST, 1908.

NO. 2

ORIGINAL COMMUNICATIONS.

A GLANCE OVER THE DEVELOPMENT OF THE TECHNIC OF MODERN GYNECOLOGICAL OPERATIONS*.

BY

AUGUST MARTIN, M. D.,

Berlin, Germany.

THE honor of being able to address this meeting I appreciate the more as it has been my sincere desire since this society conferred upon me its honorary membership in 1888. Some forty years I have been in close contact with my American confrères; at that time it was my good fortune to meet several of your most prominent representatives, Marion Sims, Emmet and Gaillard Thomas. Since those years many more distinguished Americans have been added to this number. Twenty-one years have elapsed since my visit at the meeting in Washington and that I am with you again today means that my greatest wish of the past years is to be fulfilled.

In this comparatively long period of time gynecology has experienced an unexpected and magnificent development. One could well suppose, that along with the entire medical science, gynecology, too, would be subject to fundamental change. In view of this, we must gladly confess, that every day discloses to us new and fascinating prospects. New perspectives loom up. Participating in the work of research, we feel urged to further collaboration; it is a pleasure to live and stand in the midst of this activity.

Nowhere does this fact become more evident than at our society

*Read at the 33d Annual Meeting of the American Gynecological Society May 26 to 28th, 1908.

meetings, where, face to face, we give an account of our scientific doings, and in the most ardent manner take up the results of the research work of our collaborators. Such thoughts filled me as I received your call to be present at this meeting. Your programme includes a number of very interesting contributions to the questions that are at the front today. I look forward with enthusiasm toward our transactions and am counting upon receiving much instruction.

In this connection, while glancing over the development made along the line of work during the past five decades, I became especially interested in finding out the various turns *gynecological treatment* has taken. Fifty years ago, the work of the gynecologist was limited to medical and orthopedic applications to the vulva and vagina and the collum uteri. One was more or less timid about entering the cavity of the uterus. After Sir James Simpson and E. Martin had made the discision of the narrowed os uteri, an essential step forward was noted, as well as in the employment of the *écraseur* of Chassaignac and the use of the electric cautery. During this time also, especially after Atlee, Peaslee, Spencer-Wells, Baker-Brown, Koeberlé and Keith had met with remarkably good results, abdominal neoplasms, being more exactly recognized, were attacked by laparotomy with more confidence. It was reserved for Marion Sims, however, as well as for Gustav Simon and Hegar to lay bare the vault of the vagina, and inaugurate the plastic work on the collum and the vagina. Emmet's trachelorrhaphy and the successful fistula operations of Simon and Bozeman appeared as triumphs at this stage. Intrauterine treatment was improved by the use of sponge tents in dilating the cervix and thus opening up the cavity of the uterus. In this way, after continuous efforts, the mucosa could be reached, curetted and medical treatment applied.

The next step forward was in abdominal surgery. We not only operated upon true neoplasms as did Koeberlé and Keith, Pean, Hegar and Karl Schroeder, but also upon inflammatory masses. Lawson Tait, Hegar and I proved at that time the possibility of achieving satisfactory results by abdominal operation in cases of oöphoritis and salpingitis. It was at that period we learned to our great surprise that many of these supposed inflammatory masses were due to the ectopic location and growth of a fertilized ovum.

In the meantime W. A. Freund had found a way, by means of a combination of the abdominal and vaginal methods of operation

to extirpate that most fatal malady, cancer of the uterus. It is true that in the beginning the results of this method of operation did not equal what was expected therefrom. Freund's operation, however, led the way; later, first at the proposal of his former pupil, Emil Ries, in the past ten years it has been enlarged so as to include the pelvic tissues and retroperitoneal glands. This procedure is considered today the typical carcinoma operation.

Freund's advance gave an impetus to extirpation of the carcinomatous uterus by means of the vaginal route. Czerny, Billroth and Schroeder have lead us along this way. A mighty step forward was taken. By means of the vaginal separation of the uterus we have learned, in cases of non-malignant disease of the uterus, not only to extirpate vaginally the adjacent organs, but also in certain cases to preserve them after the diseased parts have been removed; atretic tubes are opened up, partly diseased ovaries resected and the healthy remainder conserved. This advance marked the beginning of conservative operations in gynecology.

A further step was the treatment by operation of deviations of the uterus which before that time had been given only orthopedic attention. The ideas of Sanger and Olshausen opened up a wide field of operative activity for uterofixation. It was only when experience began to prove the late definitive results, that the Alexander-Adams operation began to be much more widely used, and pushed the ventral fixation into the background. The rapidly increasing frequency of laparotomy for this purpose was somewhat interfered with by Duhrssen and Mackenrodt, when they showed at the beginning of the last decade of the nineteenth century that there was a safe vaginal method of exploring the true pelvis and all of its organs.

It almost seemed for some time that the abdominal operation should be limited to large tumors in the peritoneal cavity. After a few years a reaction set in, especially as far as extrauterine pregnancy was concerned, and then as regards the inflammatory diseases of the adnexa. This occurred in spite of the advantage gained by the median vulvo-vaginal incision of Duhrssen, and especially of the lateral incision of Schuchardt, the cicatrization of the latter showing better results than the former. Both of these incisions give a satisfactory exposure of the vaginal pouch and a free route to the pelvic organs.

It is, no doubt, evident that in the course of the present century the enthusiasm for vaginal operation has subsided, so that

today, even such confident advocates as Mackenrodt have withdrawn from it and use the abdominal method in the majority of cases. This glance shows that the operative technic has undergone a peculiar undulation. After a short period during which the vaginal operation was highly favored, laparotomy came into use until further improvements were made along the line of the vaginal technic. Again laparotomy took the lead, and by its victorious advance, the vaginal operation is placed on a most modest basis today.

We ask, in view of this, what have been the conditions allowing gynecological operations to develop to such a degree? The way was prepared by getting a closer insight into pathological anatomy. This gave a basis for improving the diagnosis. B. S. Schultze, the Nestor of German gynecologists, did much toward its development, and secured for himself a meritorious place along this line of work. We have learned to differentiate the process before a tumor distends the abdominal wall, and before the entire true pelvis is blocked by the diseased organs. Following the counsel of Karl Ruge, we obtain pieces of the mucosa of the uterus and build up a diagnosis from its microscopic examinations. In addition, today biological-chemical methods assist us, so that by culture and inoculation, by blood-investigation, by a study of the secretions and excretions, we are able to get far into the field of diagnosis. We dare not forget, however, that there is yet wide extension necessary in the methods of investigation. It is in this very field that there is much work yet called for. On the other hand, many a question is open; for example, how far are genital disorders responsible for those of the urinary system and the appendix, how far may the views of Hegar and Freund, as to the significance of infantilism, about which until today we know so very little, be correct.

We must thankfully acknowledge that our activities would never have reached such extension if antiseptics had not been replaced by asepsis. You all have witnessed this development; we all so thoroughly agree in honoring Holmes and Semmelweis, Pasteur, Koch and Lister, that one needs only to mention their names. The result of their labors is seen everywhere, and its benefits extend to all departments of medicine. We, as gynecologists, it must be acknowledged, in our efforts have done a good deal toward aiding the work along this line. In the course of the development of our operative technic, we are beginning to see a rich harvest before us. Sufficient up-to-date material is now at

hand to study not only the primary results of our operations in large statistical collections, but to state also whether the results be permanent or not. We cannot deny that this testing of results brings us many disappointments. In this way many defects and false conclusions have been pointed out to us, which seriously invite criticism of our own work and prove it with renewed energy.

If in such a critical manner we examine our operative technic of today, laparotomy claims the preference over the vaginal method, on account of its bringing before us with greater clearness the pathological conditions of the whole peritoneal cavity. That is certainly to be admitted, even though the vaginal method as it appears in its development today, and as far as localized processes go, leaves nothing to be desired in the way of a wide opening in the pelvic floor to the space below the pelvic brim.

Until not long ago the most powerful claim against an abdominal operation was raised on account of the great danger to life connected with it as shown by statistics and also on account of the number of complications following it.

It is without further discussion to be admitted that in reference to the first of these disadvantages, namely, the high mortality, essential advance has been made. When we compare our aseptic measures of today with those previously used, we will at once notice the vigorous stand assumed today toward septic infection. The danger of sepsis in laparotomy increased in proportion to the amount of exposure of the peritoneum to pathogenic organisms: it is being universally attempted to shorten the operation as much as possible. At the same time, the injurious effects of narcosis are considerably lessened, and care in upholding the resisting power of the patient shows decided and evident results. Furthermore, the safe healing of the incision is insured. The incision, as practised by Pfannenstiel indubitably protects remarkably against stretching of the incision.

This we freely admit. Experience has taught us, however, that these scars are not absolutely guarded against serious stretching. Even with perfect asepsis and primary healing of the incision, the physiological processes (pregnancy, climacterium) which belong to the physiology of the female body render these scars objects of tension. If on account of some accident or some unknown reason, the healing is not effected *per primam*, the question of cicatricial extension looms up in a more alarming manner. While it is true that the master operators have long series of per-

fect healings, even they cannot feel certain that there may not be some infection of the abdominal incision, and this danger increases if the operation is upon inflammatory structures. This is present in all those cases where drainage of the field of operation is called for. In addition, another complication is to be considered as a most serious one, endangering the late results even after ideal primary healing of the incision and after a perfect primary convalescence. I refer to the terrifying frequency of adhesions of the intestines and of the omentum to the abdominal incision as well as to the stump from which the tumor has been removed. These adhesions and the significance of their consequences have been demonstrated to us by the observation of our patients for many years. No modification in our methods is at hand to cause them to disappear with certainty; neither the careful handling of the peritoneum during the operation, nor the so-called "peritonealizing" of defects, nor the attempts of influencing the peritoneal layers by bringing oily substances or salt solution in contact with them, nor the early action of the motus peristalticus counteract these complications to any satisfactory extent. They will be a constant source of danger in a laparotomy, at all events more so than in a vaginal operation. Of course, the pelvic organs are not in any way insured against the formation of similar adhesions, but if I may speak from my own experience, they occur hereby very much less frequently.

The formation of a scar in the pelvis follows with such regularity, that an exception becomes very marked. Continuous ulceration of such an incision is extremely seldom, even when it is necessary to drain an infected region. Late complications, such as hernia, are extremely rare. Also in the vaginal operations, beyond question, at times, pathological organisms ooze over the field of the incision; as a rule, however, encapsulation rapidly sets in, and the drainage through the vagina is sufficient and effectual.

Certainly vaginal operations require a special training; I might say, a more minute operative experience. It is not always so easy to expose the vault of the vagina and to force our way to the peritoneum in order to view the pelvic organs. The advantages gained, however, are a sufficient return for the pains taken, even more when we consider that after a vaginal operation the patients quickly get on their feet again, quite as soon as after a normal birth; earlier than after the most simple and bloodless and aseptic laparotomy.

That the modern method of narcotizing does not necessitate a difference between the two methods need be only mentioned here, so that the convalescence from none of these operations demands a long dorsal posture. The sooner the patients move about and then leave the bed, the more certainly are avoided the dangers of a long dorsal posture upon heart and intestines.

That the vaginal method can come in consideration only for a limited field of gynecological affections is to be acknowledged; but no one is entitled to say that tumors of the uterus and ovaries should be approached only by the vaginal method as long as they are situated in the true pelvis. I do not know of such a limitation. The boundary does not depend upon whether the tumor lies in the pelvis or not; it depends upon its movability. Even very small tumors which are firmly adherent should not be attacked by the vaginal route. On the other hand, much more voluminous masses can be operated upon vaginally if their peritoneal surface is not adherent to neighbouring organs, as their size can be diminished either by morcellation or puncture. In some cases, indeed, according to von Ott's method, these adhesions can be readily exposed to view so that they can be separated; as a rule, I consider such adhesions as a counter-indication. To be sure, even very firm adhesions may escape our diagnosis before the operation; nevertheless, a careful taking of the previous anamnesis often points to a previous peritonitis. We learn by riper experience to find these adhesions as well by touch as by their sensitiveness. And if in a vaginal operation we do unexpectedly meet with such adhesions, what hinders us from discontinuing it and ending with an abdominal section? Only now and then have I been compelled to do this; there was no injury to the patient from such a procedure.

Treating the deviations of the uterus by vaginal operation has resulted in serious disorders in pregnancy and parturition. When the fixation is made in the lowest part of the corpus, this fully develops when pregnant and acts normally in parturition as a large number of instances have proved.

No plan for restoring the normal seems to be free of failure, but none gives a smaller cicatrix from which disorders may result. The vaginal route seems to come today more in favor as following the advice of Kiefer, Gebhard and many others; the shortening of the round ligaments can be performed with complete safety through a vaginal incision.

An important advantage of vaginal operation is given by the

frequency of coexisting diseases of the uterus, of the adnexa and peritoneum and of the vagina and the perineum. This fact has gained remarkable significance, since not only the uterine displacements, but also the inflammatory diseases of the tubes and ovaries, and especially the ectopic insertion of the ovum do give us an indication for operation, I might say almost daily.

This consideration seems particularly indicated for the treatment of retroflexion, combined as it is in the majority of instances with procidentia of the vagina, cystocele and rectocele, and the loss of the perineum.

The procedures advocated by Freund, Wertheim, Schauta and others for extreme prolapse of all the pelvic organs, and especially to support a prolapsed bladder by means of the uterus turned upside down and placed under the bladder, furnish a wide and significant increase to the existing indications for vaginal operations.

Our views as to the treatment of the inflammatory condition of the tubes and ovaries have been thoroughly changed within the last few years, since better knowledge of their etiology and significance has been obtained. Much more frequently than was formerly acknowledged, gonococcus infection involves the tubes and peritoneum. Under proper treatment, healing commonly takes place and so complete may this be that full functional activity is regained. We have likewise a better knowledge of the conditions underlying septic infections and tuberculosis. Only a minority of these cases offers an *indicatio vitalis*. Very frequently we find healed processes of this kind a long time after the first stages of the disease have passed, when a recent disease is met with or some recurrence of the old one requires operation. In such cases we find dried up pus, which proves to be sterile. Thickenings and adhesion indicate beyond question what serious processes have gone on sometimes many years before. In the meantime patients have enjoyed apparently perfect health. Such cases, aggravated even by repeated serious recrudescences, heal undoubtedly very frequently and completely without operation. Such observations compel us to consider most earnestly as to whether it is right to remove these inflamed organs as long as there is no immediate danger of life. In fact, very frequently patients recover without operation in spite of gonorrhœa, tuberculosis, puerperal fever or septic infections from plastic operations.

Whether it is more advisable to operate during the acute feverish attack "*à chaud*," abdominally or vaginally is a question

that has been much discussed. In recent years I prefer the vaginal method for operating on such fresh inflammatory cases of salpingitis, cōphoritis as well as para- and perimetritis. I open by vaginal incision in order to drain through the vaginal vault, reserving laparotomy for general peritonitis. Such patients not only recover so far as relief of symptoms is concerned, but I have in a number of instances observed subsequent pregnancies and perfectly normal puerperia. The larger number of these cases come to observation in the stages between the acute attacks. In such we decide upon operation when general and medical treatment directed toward resorption have failed. Less voluminous masses without very dense adhesions can be readily removed by the vaginal route. Large masses and those in which the question of adhesions cannot be definitely settled by examination before operation, are to be removed by the abdominal route.

Varying indications are met with in the course of development of tubal pregnancy. Cases in the advanced stage, when the pregnancy has extended over a period of about three months, should be treated abdominally. In earlier stages, unruptured extrauterine pregnancies can be safely attacked vaginally. It is disputed as to which course to pursue when rupture has occurred. Here we must determine whether a hematosalpinx (sactosalpinx haemorrhagica) has formed or a hemocele. I have safely operated upon the former by the vaginal method when the tumor was larger than a fist and in cases of the latter also when the blood appeared to be encapsulated. The control of the hemorrhage, the removal of coagula and sac can be performed by the vaginal method with complete safety. Basing all operation upon the principle of removing only parts which are proved to be irrecoverably diseased, in some cases of hematosalpinx the tube can be emptied by longitudinal incision and this incision can then be closed. I concede, however, that under unfavorable circumstances, as lack of sufficient operative routine, and where assistance is unsatisfactory in the house of the patient, laparotomy allows us to care for the bleeding tube rather easier and quicker; and this is to be our first consideration when hemorrhage threatens the life of the patient.

Recently, Schauta has given a wider perspective by operating upon cancer of the neck of the uterus by means of a very extensive vaginal operation. He reports splendid primary and permanent results, based on a large material. The extirpation of the para

metrical connective tissue can be safely accomplished in this way. Schauta does not attempt to remove the retroperitoneal glands. It is true that by doing so he diverges from the present-day view of surgeons—removing any gland within reach in cancerous outgrowth. Schauta depends upon the fact that enlarged retroperitoneal glands excised in cancer cases have proved only in a minority of instances to be cancerous.

I have attempted to give a fair view of the abdominal and the vaginal route. I fully appreciate the difficult position of the latter; its dominion is limited. It requires a special routine in diagnosis and a particular training for operation. I perfectly know that in this country quite exceptional attention is paid to the appendix, which you remove far more frequently than we do.

I hope that you will consider these remarks based upon intimate consideration of the subject. In case you resolve to give to vaginal work once more a fair chance, I dare hope that, meeting some years later, many of you will agree with me in valuing it higher than is usual today.
