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A

LECTURE

ON

ATRESIA VAGINÆ,

BY

N. HARD., M. D.,

PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN, IN INDIANA MEDICAL COLLEGE.

SESSION 1847--8.

PUBLISHED BY THE CLASS.

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LA PORTE, INDIANA:
W. & J. MILLIKAN, PRINTERS.
1848.

LAPORTE, IA., NOV. 29TH, 1847.

PROF. N. HARD,

Dear Sir:

IN accordance with a resolution passed by the Students of Indiana Medical College, held at a meeting in the Amphitheatre on Wednesday, the 25th inst., the undersigned respectfully solicit a copy of your lecture on Atrisia Vagina, with your very able and instructive report.

Yours Very Respectfully,

R. I. GATLING,
M. VROOMAN, } *Committee.*
L. C. ROSE,

INDIANA MEDICAL COLLEGE, NOV. 30, 1847.

MESSRS. GATLING, VROOMAN AND ROSE,

Gents:

YOUR polite note, requesting a copy of my lecture on Atrisia Vagina for publication, has been handed to me. As the class are pleased to think the case therein reported as interesting to the profession at large, it is manifestly not my duty to withhold it. For this renewed expression of confidence, please accept for yourselves and the class my profound respect.

N. HARD.

ATRESIA VAGINÆ.

GENTLEMEN.—

I like the good old practice of greeting the medical class at each annual session with an introductory discourse. I am sorry to observe that this practice, fraught with so many pleasant associations, should have fallen into such disrepute—should have met with so much neglect. There seems, moreover, to be some solid advantages in the plan of devoting an hour in the first interview with the class, in the discussion of some topic of general interest, not embraced in the course of daily instructions.

I remember, when a student, the lively interest with which we looked for each annual introductory, and the heartfelt gratification these greetings afforded. Who does not feel, in his heart, to thank the illustrious Rush for penning and publishing his admirable volume of introductory essays? Who can rise from their perusal without a clearer head, and a better heart? We shall endeavor to uphold this usage of the "olden time," and shall call your attention, at present, to a class of accidents and diseases not very fully discussed by lecturers or in books—

INJURIES OF THE VAGINA DURING PARTURITION; AND THE RESULTING INFLAMMATIONS, ADHESIONS, AND OBLITERATIONS OF THAT CANAL.

Notwithstanding the immense distension of the vagina during the passage of the fœtal head, and the long continued pressure to which it is sometimes subject, still, inflammation from these causes is not of frequent occurrence. So wisely is this organ adapted to suffer distension, displacement, pressure, and contusion, that in a majority of difficult labors, and even when the parts have been irritated with instruments, serious results seldom follow; the parts soon regaining their natural condition. On the other hand, violent inflammation, accompanied with sloughing of the vaginal walls, has been known to follow a speedy and natural labor.

As a general rule, unquestionably such results are most likely to occur after lingering labors, where the fœtal head has remained for a long time in the excavation, and especially when instruments have been resorted to to effect the delivery. But the possibility of this accident supervening upon natural labors, should teach us never to neglect informing ourselves of the condition of the vagina in puerperal women.

Acute Vaginitis has frequently been observed in young females who have never been pregnant, and where the disease is not traceable to any obvious cause; and in such cases may eventuate in the adhesion and obliteration of the tube, giving rise, at the period of puberty, to all the evils of retained menses. Although it is not the character of mucous surfaces to adhere from inflammation, still ulceration and sloughing of the mucous tissue, is no uncommon termination of inflammatory action; and when once a slough has separated, an abrasion has occurred of the mucous membrane, the adhesive process is set up, as readily as between inflamed contiguous serous surfaces. Such adhesions have been observed at different parts of the alimenary tube and the urethra, as well as in the vagina; and are liable to take place whenever the opposing surfaces of a mucous tube have become abraded.—In this manner adhesions very frequently occur between the labia of young girls, which admit of ready relief from the bistoury.—A more serious cause of imperforation of the vaginal canal, arises from a thickened and imperforate hymen. This structure has sometimes been found of the thickness of two inches, demanding an operation of considerable difficulty for the relief of the patient. Cases of a still more aggravated character have been known to follow simple inflammation of the vagina, namely, complete adhesion of the parieties of the canal, and this condition occurring in a female who menstruates, has called for an operation beset with numerous difficulties, in order to preserve the patient's life.

The term Atresia has been bestowed on imperforations of the vaginal tube. Atresia is the generic term, and comprehends two varieties. 1st, Occlusion, where the vaginal walls, more or less abraded, are adherent. 2d, Obturation, where the passage is obliterated and filled up with a morbid growth.

Each of these varieties of obliteration are further called complete, or incomplete, in reference to the extent of the occlusion; and congenital or accidental, as the deformity may have existed at birth, or arisen from accidental circumstances. If Atresia vagina be congenital, or occur at an early age, it may totally escape observation; and no especial inconvenience will be experienced until the period of puberty, at which time the symptoms of menstruation will be present without the discharge. At each menstrual epoch the pains return with increased severity, and in many instances continue through the entire month—the abdomen swells, the organs within the pelvis suffer compression, and unless

the patient is relieved by an operation, after much suffering, her life is sacrificed. The accidental variety, especially that which follows difficult labors, is generally preceded by all the phenomena of inflammation, which can hardly fail to attract the notice of the medical attendant; and in most instances, sloughing of the vaginal parieties will take place to some extent. Whenever such symptoms occur. the medical attendant should satisfy himself of the exact condition of the parts. For this is the precious time, when a judicious treatment may mitigate the inflammation, and effectually prevent the closure of the canal. This last indication is readily fulfilled by the constant use of bougies. We will cite a few examples of this rare affection.

In the year 1826, Dr. Segalas communicated to the Acad. de Med., the case of a woman whose vagina became obliterated after a difficult labor, causing complete retention of the menses. No mention is made of an operation having been attempted for the relief of the sufferer. Another case was laid before the same body in 1834; of occlusion of the vagina from the injection of sulphuric acid into the canal, by the patient herself, for the purpose of procuring abortion. No operation was attempted, and the case terminated fatally, by spontaneous rupture of the uterus, and effusion of its contents into the peritoneal sac. This is one of the the most probable terminations of occlusion of the vagina in a menstruating female. The uterus goes on to enlarge at every menstrual period, until it acquires its maximum of distension, when its walls give way, and death speedily ensues.

In some cases the general health fails, and the patient sinks, before a very great accumulation has taken place in the uterus.

A case came under the observation of Prof. Flammand, where the vagina was obliterated to the extent of four inches. The Prof. succeeded, after a tedious operation, in separating the adhesions with the knife, without injuring either the rectum or urethra, and with complete relief to the patient.

In regard to the propriety of attempting an operation for the relief of occlusion, there can be but one opinion, where the obliteration is partial. *The operation must be attempted.* The extent of the obliteration can in most cases be ascertained with a degree of certainty, by a carefnl and thorough examination. A sound is to be passed into the bladder, and a finger into the rectum, and the sound carefully traced by the finger. In this way, the space separating them may be estimated, and the character of the intervening substance ascertained. If the upper portion of the vagina

be not involved in the adhesion, and the os-uteri not occluded, the canal will be filled with the menstrual fluid, which will be evident to the finger. Where the adhesion is complete, shutting up the entire length of the vagina, the propriety of an operation is rendered more questionable. The high authority of Morgagni, Blasius, and Benivoli, is against it; each of whom, it is stated, undertook the operation under such circumstances, and were obliged to leave it unfinished. And it is to be remembered that in these cases the parieties of the canal were only adherent from inflammation. How much greater, then, must be the hazard of an operation where the vagina has completely sloughed away, leaving nothing but a cicatrix uniting the rectum with the urethra and bladder. Yet such a case is on record, where an operation was performed with success. The case to which I refer may be found in the "Phil. Pract. of Mid., by Prof. Meigs," and is undoubtedly the most interesting case heretofore published, when we consider the aggravated nature of the case, the difficulties necessarily encountered in the operation, and the successful result. I shall present a brief abstract of the case:

A woman came to consult Dr. Randolph, of Philadelphia, for occlusion of the vagina. After rapid labor, and considerable uterine hemorrhage, she was attacked with inflammation and sloughing of the vagina. The discharges gradually ceased, and the woman recovered her health. When examined by Drs. Randolph and Meigs, a tumor was found occupying the hypogastrium, circumscribed, firm, and resisting. Upon separating the labia, there was nothing but the genital fissure. A finger introduced into the rectum, detected the enlarged uterus, filling up the excavation. When a sound was introduced, it could be traced by the finger, the only tissue separating it being the coat of the bowel and the urethra adhering together. The vagina had sloughed away, and the uterus was distended with menstrual fluid. Dr. Randolph operated with the intention of making an artificial vagina, and giving exit to the fluid. A metallic staff, slightly curved, was introduced into the bladder, and the urethra held up under the arch of the pubes, while, with the left index finger in the rectum, he dissected, by horizontal strokes with the bistoury, the tissue between the rectum and urethra, and carried his incision nearly up to the substance of the womb, without either wounding the rectum, urethra, or bladder. It was found impossible to ascertain the position of the os-uteri, and the case was left at this stage, with the hope that the increasing expansion of the uterine

globe, would eventually bring the os-uteri in relation with the artificial vagina, (which was to be kept open by bougies.) and the menstrual fluid would discharge by this passage.

The patient returned to her home, and in three months came again to Philadelphia for further treatment. The uterus had not emptied itself into the artificial vagina, but had become still further distended. The sufferings of the patient were great, and it was resolved to puncture the uterus through the rectum, and thus relieve the patient by withdrawing the fluid from the distended womb. This was accomplished with a curved trocar and canula. In the course of twenty four hours, there had issned from the canula, about twenty five ounces of menstrual fluid, of a dark red color, without odor, and about the consistency of meconium. The uterine tumor disappeared, the patient's sufferings were greatly alleviated, and she left the city much improved in health. About a month after her return home, she discharged through the artificial vagina, a fluid similar to that which flowed from the canula. Again, four months after, she discharged through the vagina, about twenty five ounces of a similar fluid. Five years after, the report goes on to say, the woman's health was good. Her menstruation was regular, but painful. The artificial vagina had become a small, sinuous opening, communicating with the cavity of the womb, through which she menstruated. The result of the operation in this case, was highly gratifying, and creditable to the boldness and skill of Drs. Randolph and Meigs. The patient unquestionably owed her life to it.

I am now, gentlemen, about to bring before you a case occurring under my own observation recently, of exceeding interest in many respects—in reference to the history of the case, the cause of the obliteration, the operation and its results.

CASE OF ATRESIA VAGINÆ.

History. Mrs. R. T. Ostrander, of Geneva, Wisconsin, aged 35, of robust constitution, primipara, was taken in labor in the forenoon of May 6th, 1846. Near 12, M., the medical attendant made an examination, and found the head presenting, in the Left Occip. Acetab. position, and gave a favorable prognosis. In a few hours he requested a consultation, and a neighboring physician was called as counsel. Soon after his arrival, and before night, the counsel proceeded to apply the forceps, the uterine pains in the mean time were strong and vigorous, and the patient in no-wise sinking. The instruments used were the long curved

forceps. From one to two hours were occupied in endeavoring to apply the instruments, and the attempt finally abandoned. A prompt anodyne was then administered, and further counsel called. The third physician arrived at one P. M. next day. On examination, he stated that the head was still above the sup. strait., and proceeded to introduce the vectis. After using this instrument (the vectis) about an hour, he stated that he had brought the head into the excavation, and effected the rotation of the occiput. The first physician called as counsel then proceeded to apply the forceps, which he finally succeeded in doing, and to use his own words, "by exerting a good deal of force;" accomplished the extraction ot the fœtus, still born. The last physician called, states that he found the patient in a state of exhaustion, calling for speedy delivery. The placenta was readily extracted. The medical attendant states that peritoneal inflammation followed, with great swelling and tenderness of the vulva, vagina, and soft parts contiguous, which yielded to an anti-phlogistic course of treatment. During the convalescence, which was tedious and prolonged, the discharges from the vagina were copious, purulent, and offensive, and frequently large patches of a membranous appearance were thrown off described by the husband as "resembling the coat of the bowel." At one time a large piece of membrane rolled up, presented in the orifice of the vagina, and was extracted by the husband with forceps. Notwithstanding the knowledge of these facts, no especial attention was directed to the condition of the vagina, until about the first of July, when it was ascertained that the canal was completely occluded.

Condition of the Genital Organs. In Sept. the patient came to St. Charles to consult Dr. Richards and myself in relation to her case. Upon examination the following was ascertained.—The vaginal orifice was perfectly closed. The anus and meatus urinarius were separated by a space of only three fourths of an inch—composed of a cicatrix, with a small fungous growth in the centre, projecting and pendulous. Upon introducing a staff into the bladder, and a finger into the rectum, the staff could be plainly traced by the finger to the distance of three or four inches, the intervening substance being immoveable, thin, firm, and giving no evidence of the existence of any part of the vagina. It was rendered quite clear to our minds, that the *vagina had completely sloughed away*, and that the urethra and rectum had been drawn

together, and united by a very thin but firm cicatrix. The uterus, slightly enlarged, was discovered by the finger in the rectum, but the position of the cervix could not be clearly made out. The patient's general health was good at this time, but she was justly alarmed from having experienced all the symptoms of menstruation a few weeks previous to her visit to St. Charles. No medical treatment was advised, but the patient was cautiously promised an attempt to relieve her by operation, if the catamenia should become fully established. The patient returned to her home.

Three months after this, I was called to see the patient. Her health was suffering from the accumulated menstruations of four months, and the fifth menstrual period had just set in. The pains were very harrassing, and had continued, for the last time, three weeks, leaving but an interval of one week, and that interval by no means free from pain. The hypogastric region was slightly enlarged, and the uterine globe could be readily distinguished pr. rectum, considerably distended.

The condition of the other genital organs the same as on the first examination, with the exception that the parts seemed firmer and more contracted. The patient implored an operation for her relief, notwithstanding the chances of a failure were candidly stated, and the many dangers of the operation were set before her in their proper light.

Steps of the Operation. Dec. 26, 1846, at three o'clock P. M., proceeded to operate with the view of making an artificial vagina, and relieving the uterus of the menstrual fluid accumulated within it, in the presence of Dr. Clarkson Miller, and with the assistance of Dr. L. F. Torrey.

I would here take occasion to express my obligations to Dr. Torrey, Demonstrator of Anatomy in Ind. Med. Col., not only for valuable suggestions and counsel, but for his assistance in several intricate and important steps of the operation.

After the rectum and bladder were emptied, the patient was placed nearly in the position recommended for lithotomy, the legs flexed and separated, and the perineum resting free over the edge of a matrass. A metallic male catheter was passed into the bladder, and the urethra held up firmly under the pubes—the pendulous growth from the vulva was first excised with scissors. Then with the index finger of the left hand introduced into the rectum as a guide, I commenced by making slight horizontal incisions with the scalpel, and continued them for the depth of half an inch.—

The scalpel was then exchanged for a trocar and canula, (made for the occasion,) about eight inches long, and somewhat smaller than a common pipe stem, which was carefully pushed forward about an inch further. During this procedure, the triangular point of the trocar was distinctly felt by the finger in the rectum as it was passing, and on the other hand the instrument communicated an impression to the catheter in the urethra, which was plainly perceived by the hand that held the catheter, so small was the space between the two canals!

The trocar was then withdrawn, and the artifical canal cautiously enlarged by slight lateral incisions with the bistoury.—The finger was then crowded into the opening, effecting still further penetration. In this way, by making use successively of the trocar, the bistoury, and the finger, in the order here stated, (the trocar pioneering the way,) the uterine tumor was eventually reached, without penetrating either the rectum, urethra, or bladder, and leaving a canal sufficiently large to admit the finger.

The canal thus made was 4 1-2 inches in depth, and struck the uterus at about the anatomical division between the cervix and body of the organ; about two inches from the os-uteri, in the distended condition of the womb. We were now able, by passing one finger into the artificial vagina, and another into the rectum, to ascertain, with precision, the locality of the os uteri. It was felt between these fingers, lying upon the rectum, and pointing obliquely to the left and posteriorly, completely imbedded in a cicatrix, which thinned off gradually, and lost itself in the wall of the rectum. An attempt was made with the finger, and then with the scooped extremity of the director, bent at an angle, to break up the adhesions around the cervix, but without success.—Two methods of opening the uterus then suggested themselves, between which to choose—1st, to introduce the trocar, and by depressing its point, and pushing it forward, to penetrate the uterus in the situation of the original os-tincæ; 2d, to make an incision with the bistoury, carrying it down in the direction of the os-tincæ. The latter course was determined upon, and the bistoury carried up in the groove of the director, and the incision with great difficulty made, but not so deep as to penetrate the uterine cavity. The bistouıy was now exchanged for the trocar, its point placed in the middle of the incision just made, and gradually pushed into the cavity of the uterus. Upon the withdrawal of the trocar, leaving the canula in the uterus, the menstrual fluid flowed freely.

The fluid continued flowing from the canula for the space of ten minutes, during which time ten ounces were withdrawn, and during the following night, about six ounces more escaped. An attempt was made with the bistoury to enlarge the aperture in the uterus, but the organ was now collapsed, and its walls yielding and moveable, and the artificial vagina so small as not easily to admit the finger and bistoury, so that the attempt was abandoned.

In order the more readily to succeed in introducing a catheter into the uterus, a wire was passed into the uterus through the canula, which was withdrawn over the wire. A flexible male catheter, of suitable size, with both ends open, was then slipped over the wire, and directed into the uterus, and the wire withdrawn. The catheter, properly secured, was left in this situation. Not more than an ounce of blood was lost. The moment the menstrual fluid was withdrawn, the patient expressed herself completely relieved of the distress which had so long annoyed her. The operation lasted 3 1-2 hours, including occasional intervals of rest for the patient. Pulse at 88 per minute, during the operation, at 96 while the fluid was being withdrawn; in ten minutes after, 86.

The patient was very comfortable during the night, and slept quite calmly a part of the time; and two days after, when I took my leave, her condition was equally favorable. The case was left in the care of Dr. C. Miller, with instructions to keep the canal open by elastic catheters, frequently changed, and after the inflammatory symptoms subsided, to attempt dilatation of the passage by bougies, gradually increasing their size.

Result. Of the progress of the case since the performance of the operation, I have been kept duly advised by letters from Dr. C. Miller. Inflammation soon set in, involving the constitution in considerable disturbance, and requiring the use of the lancet several times. A good deal of difficulty was experienced in keeping the catheter in the passage, and after its withdrawal, its introduction was sometimes rendered impossible for several days.

Under date of January 27, Dr. Miller writes:—"The result in Mrs. O.'s case is quite uncertain. The parts are much inflamed, the discharge is copious, and I fear the opening into the womb is closed."

After this, his letters gave more encouragement, and in his last, under date of April 25th, he gives the result of the case in the following words:—"Mrs. O.'s general health is good. She has a passage in the place of the vagina, which enters the uterus,

and of sufficient size to admit the finger. Through this artifical vagina she *menstruates* regularly. She has no leucorrhœal or puriform discharges. The passage is not very sensitive, and in my opinion, would readily admit of dilatation by bougies. But to this she objects. Her general health is such that she walks to church, visits, and does her house-work."

Remarks. I deem this case of so much importance, that I shall examine a little more closely some of its most important features.

1st. The management of the labor. If the facts are such as I have stated in the report of the case, (and they are drawn from the statements made to me, of the three physicians in attendance,) there was an obvious violation of the established rules of practice, in two particulars. First, in reference to the time of applying the forceps. The labor came on in the morning—the presentation was natural, yet the application of the forceps was attempted, and persisted in, before night, while the uterus was acting vigorously, no accident had occurred to render immediate delivery necessary, and no symptoms of exhaustion were present. We find nothing to justify this wanton attempt. Let me take this occasion to imprint on your minds the true rule of practice in resorting to the forceps. You are to be guided, not by the length of time the labor has lasted, nor by the consideration that you may in that way hasten the birth of the child, and relieve the sufferings of the woman. You are to use the forceps *only*, when, if the labor be not speedily terminated, the life of the mother or the child, or both of them, will be endangered. Interference with instruments, unless the indication for their use is positive, cannot be too strongly condemned by all who would aid in freeing the obstetrical art from the reproach under which it has labored in times past. The second error consists in the endeavor to apply the forceps while the head was still above the superior strait. No point in obstetrical practice is more clearly defined, than the jurisdiction of the forceps. And it is a great error to suppose that turning, and the forceps, are mutually substitutes; or that in any given case, there is room for choice between the two modes. In cases of accidents, or other imminent circumstances, calling for prompt delivery, the two most common and valuable resources are "turning" and the "forceps." But in cases where turning is the appropriate resource, the forceps cannot be safely applied; and on the other hand, when the forceps are applicable, the maneuver of turning is out of the question. Here is the general rule—if

the head be above, or only engaging in the superior strait; you are called upon to turn; if it be below the brim, or in the excavation, the forceps are the appropriate means of relief. In the case under consideration, we have the explicit statement of the third physician called, that on the afternoon of the second day, he found the head above the superior strait, while a tedious manipulation with the forcepts had been made the day previous.

2d. The condition of the menstrual fluid. I exhibit to you, gentlemen, a sealed bottle containing some of the fluid withdrawn from the uterus. This fluid had been accumulating in an hermetically sealed womb five months. It flowed freely from the canula in a glutinous stream. Its consistence was about that of treacle, its color a little darker, and so adhesive and glutinous was this substance, that in dipping up a spoonful, it would all run out like the albumen of an egg. It was inodorous, and without coagula, evincing not the least sign of a putrefactive tendency. The only change which the fluid had undergone from retention for so long a time, was an increase in its spissitude, arising, probably, from an absorption of its more aqueous particles. This is certainly one of the most remarkable facts in physiology. It seems to be in the generative passages alone that sanguineous accumulations are preserved without any change.

In regard to the essential nature of this fluid, there is much diversity of opinion. The advocates of its sanguineous character have multiplied much of late.

3d. *The Operation.* In reviewing the several steps of the operation, I can find but one point where I would vary the procedure, had I a similar case on hand. I should have preferred to have made a larger opening in the uterus, and intended, in this case, to enlarge the opening after the fluid was withdrawn. But on making the attempt, I found the organ collapsed, and the parts yielding and moveable, so that with so small a canal, not admitting both a finger and the instrument, it was highly hazardous to attempt it. In a similar case, as soon as I observed the fluid flowing from the canula, I should stop it with a cork, and proceed to enlarge it, with but little risk of doing injury.

I am inclined to look with great satisfaction on the employment of the small trocar, in conjunction with the knife, in separating the rectum and urethra. I am satisfied that the attempt to make a passage between these two canals with the knife alone, when the space was so very limited, must have resulted in the perforation of one or the other. But when once a canal was made, however

small, by carefully crowding the trocar forward, the enlargement of it by the bistoury and finger, was effected with much less risk. The operation was borne by the patient with the most heroic fortitude.

The proudest trophies of modern surgery, consist in its many successful operations for the relief of deformities, both congenital and accidental. Most that is original in the surgery of the last quarter of a century, is in this field of enquiry. The brilliant successes of Tenotomy, and the broad range of Plastic operations, are the results of this tendency of modern surgery. And altho' its results are less astounding than the bold innovations of a Larrey, a Dupeytren, a Cooper, or a Physic, still, we are persuaded they have tended, probably in a greater degree, to advance the interests of the great cause of philanthrophy.