THE TREATMENT OF ANOMALOUS PELVIC DEVELOPMENT IN THE FEMALE, WITH REPORT OF CASES.

BY JOSEPH F. TODD, A.M., M.D.,

BROOKLYN-NEW YORK.

IN looking over the gynecological reports of hospital, as well as private, practice, one would almost be forgiven if he arrived at the conclusion that all gynecologic diseases were due either to indiscretion upon the part of the patient or her medical attendant.

Pelvic infection, whether cellular, tubular or ovarian, together with the injuries of childbirth and their sequences, not only usurp the greater part of the gynecological surgeon's time and ingenuity in the operating room, but also claim the greater length of attention in their writings. That Nature sometimes fails, how-

ever, in the stage of evolution is well recognized, and that this failure may involve the female pelvic organs is well attested by the number of young women who are daily seeking relief. The majority of these failures are during the so-called period of secondary development, when the organs are preparing to take on their normal functional activity, but a certain proportion occur during primary evolution—during the life in utero—and, with your permission, we will present some cases that have come to our notice during the past few years.

ANATOMY. The Fallopian tubes, uterus and vagina are developed from two bodies known as Müller's filaments, which make their appearance during the early weeks of gestation. These club-shaped filaments approximate at their lower extremities, coalesce for about two-thirds of their length and become tubular. The septum which extends up the entire length of coalescence is obliterated, leaving one cavity instead of two. This cavity becomes the vagina and uterus, and the upper clubbed ends become fimbriated and form the Fallopian tubes. Later in gestation, the upper tubular portion increases in thickness, and the division of uterus and vagina becomes more marked. The ovaries are formed from the genital glands, and the external genitals from the genital tubercles.

Arrest of development at different stages of evolution will give the malformations that are met with in practice.

In the first place there may be an atresia of the vagina; that atresia may be complete or partial, and may be situated at the introitus (imperforate hymen), or between the introitus and cervix; again, the septum may not have been obliterated, and a double vagina is the result; or, again, these filaments may have remained solid, and instead of a patulous vagina, there is simply a solid cord between the bladder and rectum (absence of vagina).

Again, the uterus may be the seat of the deformity, and depending upon the development of the ducts separately, the failure of absorption of the septum, or partial coalescence, etc., one of the many deformities may result.

SYMPTOMATOLOGY. The question of symptomatology and treatment in these different conditions is varied. During the period of childhood no symptoms are manifest; when puberty is reached and the organs commence their functional activity, the symptoms begin, and their severity depends upon the degree of deformity. Of course, in the complete atresias of the vagina, with functionating uterus and ovaries, the pain and absence of menstruation are the predominant symptoms, and the usual menstrual molimen, with increasing pain at each period and absence of flow, is presumptive evidence of vaginal obstruction. This condition may go on for months until, as in one case we will enumerate to-night, the retained flow was sufficient to make a tumor visible through the abdominal wall. If the obstruction is but partial, the scantiness and prolonged duration of the flow, with the passage of dark, grumous, offensive material are the characteristic symptoms.

If there is a malformation of the uterus itself with normal ovaries, then we have all the pain attendant upon an organ attempting a function for which it is improperly fitted; colic, tenesmus, backache, pain in the groins, headache, etc., at first coming before and during the flow; later, on account of the pelvic congestion, continuing for days after the flow has ceased.

TREATMENT consists all the way from a simple incision of a thin membrane up to a pan-hysterectomy, depending upon the degree of deformity, the symptoms and their severity.

In the cases where the uterus and ovaries are healthy and functionating and the obstruction is due to an imperforate hymen, all that is necessary is the removal of the obstructing membrane and the washing out of the retained fluid, if any is present, and the prevention of annular contraction;

in these cases it has been our custom to incise the hymen fully and close the raw surfaces with continuous catgut sutures. In the cases where these patients are married, and dyspareunia, due to narrowed introitus, is the symptom demanding relief, satisfactory result is obtained by incision of the introitus posteriorly, and the closure of the incised surface by suture of the mucous membrane and skin; i. e., making a posterior incision, putting it upon the stretch and suturing at right angles to the incision.

In those cases of imperforate hymen where large quantities of menstrual fluid are retained in the vagina, and finally in the uterine cavity itself, with bulging vagina, and even tumor reaching half-way to the umbilicus, there has been some difference of opinion as to free incision and thorough irrigation, or a simple small incision to permit of drainage, and later the complete operation. Our experience has led to the belief that free incision and thorough and careful irrigation, with antiseptic fluid, is safe and satisfactory, and that is our custom.

Some cases present themselves in which the external genitals are apparently normal, but the obstruction is situated between the introitus and cervix; the treatment is similar to the cases considered, except that more care must be exercised to prevent contraction. The cases that have come to our notice were those in which the diaphragm was incomplete, and it was incised laterally and anteriorly and then manually dilated. We found no necessity for glass tubes or tents, but relied entirely upon iodoform gauze, well lubricated, and in column of sufficient size to keep the cut edges upon the stretch during healing; the column being removed and replaced, as required.

Cases of double vagina, or vagina with a septum, do not give symptoms, and are usually discovered, either accidentally during examination for other cause, or during labor. The vagina with a septum may offer obstruction to delivery, as in the case reported below, and there is nothing to do but make an incision parallel to the vagina, and suture if hemorrhage is sufficient to warrant it, otherwise incision is all that is required.

Aside from these cases, which are not only readily relieved of their symptoms but rendered sexually active, there are cases in which relief at the expense of mutilation is all that science can offer. In the cases of so-called absence of vagina and uterus, where the ovaries are comparatively normal, menstruation does not occur, but all the nervous phenomena, with marked severity, recur regularly and drive the patient to seek relief at the hands of the surgeon. Ovariotomy is all that he can offer. Or the cases of normal vagina with malformed uterus, for instance, as in Case VIII, where the uterus was bicornate, and nothing short of hysterectomy gave the girl relief.

Some cases of deformity are discovered accidentally, as in Case X, where, during operation for inflamed ovarian cyst, the congenital absence of ovary and tube was found.

A few cases taken from the Gynecological Department of St. Peter's Hospital and private practice may exemplify what has been said:

Case I.—E. E., aged 28, single, born in United States. Menstruation began at 16 years, recurring every 28 days, lasting for seven days, though scanty, painful and offensive. In general appearance patient was poorly nourished and highly neurotic. Examination revealed a small introitus, the vagina being closed by the so-called cribriform hymen, in which the two or three openings were so small as to admit hardly an ordinary uterine sound. Bimanual rectal touch revealed a uterus and appendages apparently normal, and pressure against the anterior rectal wall caused the discharge of dark, offensive material from the vagina.

Diagnosis: Obstruction of vaginal orifice.

Treatment suggested and accepted, and under ether anesthesia, which is the anesthesia used in all our cases, the hymen was freely incised, permitting the escape of an ounce or two of offensive fluid. The vagina was thoroughly irrigated with bichloride of mercury, 1 to 5000, under low pressure, followed by sterile water.

Bimanual examination confirmed the normal condition of uterus and ovaries, and the patient made an uneventful and complete recovery.

CASE II.—Represents the class of cases of partial atresia, due to rigidity of hymen and consequent dyspareunia.

Mrs. S., married two years. Menses began at 18, regular, but scanty and painful. Intercourse impossible on account of pain. Patient well nourished and healthy. Examination showed the narrowed and hyperæsthetic introitus. Vaginal examination being impossible, bimanual rectal investigation was resorted to, and showed a well-developed uterus and ovaries.

Treatment. Under anesthesia, the posterior commissure was incised, in the median line, for about one inch, and the mucous membrane of the vagina was sutured to the skin with catgut interrupted sutures, closing the cut surface. Recovery was without drawback, and eleven months later the lady was delivered of a nine-pounds male child, without difficulty, and without laceration sufficient to require suture. The child was well developed but hypospadic.

CASE III.—Miss L., aged 14, came to us complaining of severe periodical attacks of pain. The pain recurred monthly, with all the evidences of menstruation, without the flow, and of increasing severity. Of late there had been an appreciable increase in the size of the abdomen.

The family druggist having exhausted his stock of remedies and not having cured her amenorrhea, she consulted her family physician, who referred her to St. Peter's Hospital. Examination showed a well-developed young girl, of ruddy complexion, and apparently in perfect health. A well-defined tumor extended half way to the umbilicus, and a bulging membrane completely closing the vaginal entrance, told the story of an imperforate hymen, with retained menstrual fluid. The following morning this membrane was incised laterally and antero-posteriorly, and 48 ounces of fluid were evacuated. Thorough irrigation with weak creolin solution, a suturing of the incised surfaces with running catgut completed the operation, and four weeks later the young girl left the hospital perfectly well, having menstruated normally and painlessly in the interim.

CASE IV.—M. B., 15 years of age, was sent to us on April 16, 1906, with the following history: At 11 years of age patient had severe attack of diphtheria, and menstruated slightly at that time. She did not again menstruate until June, 1895, then in September and January, 1896; the flow was scanty and always preceded and accompanied by severe pain. The young lady sought relief for the irregular and scanty menstruation, but especially for the severe abdominal pain.

Examination revealed a practically imperforate hymen with retained fluid. There was a small orifice sufficient to admit a small probe, but only discernible by causing the menstrual fluid to exude by rectal pressure.

Operation, April 17, 1896. Patient being anæsthetized, a free incision was made with the cautery, and thirty ounces of fluid evacuated. The usual irrigation with mild antiseptic fluid and rest in bed for ten days completed the treatment, and in three weeks the patient returned to her home.

CASE V.—In the cases cited the stenosis has been at the introitus. It is possible to have a vaginal stenosis, partial or complete, in which the introitus is practically normal.

M. C., 27 years of age, sought relief for dysmenorrhea, and because of a dark, grumous, offensive vaginal discharge. Examination by vagina revealed a rather rigid hymen, and midway between the introitus and cervix, a diaphragm, apparently completely occluding the vagina; the uterus was made out beyond the obstruction, and by bimanual rectal touch was found to be small and antiflexed. Ocular examination by means of a Syms speculum revealed an opening in the obstructing membrane close to the anterior vaginal wall.

The patient accepted the proposed line of treatment, and under ether anæsthesia the obstructing membrane was freely incised from wall to wall antero-posteriorly and laterally; it proved to be very dense, but not vascular. Beyond it was found quite a collection of menstrual fluid, which was removed by irrigation with a two per cent. creolin solution.

The question was considered of how to best deal with the remnants of the diaphragm, and prevent cicatricial contraction, and we resolved to insert in the vagina a column of iodoform gauze, well lubricated with sterile vaseline, and of sufficient size to keep the healing surfaces thoroughly stretched; this dressing was permitted to remain a week, and was replaced under chloroform anæsthesia with a strip of gauze well lubricated. The patient was discharged cured on July 19, 1899. She has since married, and was successfully delivered at term without complication.

CASE VI.—M. McD., aged 38, foreign birth, married two years; had never been pregnant. Menses began at 18, recurred every 28 days regularly, continued three days scantily and without pain. Three weeks previously, six weeks having elapsed since her last menstruation, patient began to flow, with severe crampy pain; this flow continued, with pain of varying severity, up to the time she was first seen, May 10, 1899, and patient supposed she was miscarrying.

She was well nourished, though excessively nervous, and certainly not under 38 years of age; temperature 101 degrees, pulse 130. Vaginal examinations showed a dark, fetid discharge scantily exuding from the upper vagina, which was walled off at about its upper third by a thin, bulging membrane. Pressure upon this caused the material to exude more rapidly. Absence of all signs of pregnancy led to the diagnosis of retained menstrual fluid, and the patient was removed to the hospital on May 14, 1899. Two days later the obstructing

membrane was broken up by means of a uterine dilator and then manual dilatation. About three ounces of fluid were liberated. The vagina was thoroughly cleansed by prolonged creolin irrigation, and examination of the uterus, under the anæsthesia, verified the absence of utero-gestation. The patient's recovery was rapid, and on May 30, 1899, she left the hospital. She has never become pregnant, and the contraction has been very slight.

CASE VII.—That a double vagina, or vagina with a septum, will escape notice until examination for other causes reveals it, is well shown in the following case:

Mrs. B., age 30, married, and of regular menstrual habits, was first seen during labor with her first child. Labor progressed satisfactorily up to complete cervical dilatation, when further progress was impeded by a dense membrane extending from the introitus to the cervix and dividing the vagina into two distinct cavities—failure of absorption of septum of Müller's coalescence.

Treatment evidently required division of the band, which was promptly accomplished with blunt scissors, and labor terminated instrumentally. The membrane was very dense but not vascular, and no hemorrhage being present, it was decided suturing was unnecessary, and patient convalesced satisfactorily. There was no further trouble, and consequent pregnancy and labor were normal.

CASE VIII.—M. A., born in Sweden, 28 years of age, maried two years. Had never menstruated nor had coitus been possible. She knew she was unlike other women, and came to the hospital to see if anything could be done for her.

Examination showed a small depression between the rectum and the urethra, and bimanual rectal touch a rudimentary uterus and vagina, but apparently healthy ovaries. Anæsthesia confirmed the diagnosis. The patient's only suffering being mental, and the prospects of making a satisfactory artificial vagina being very remote, she was discharged with advice to return if pain became a factor. One year later she returned for relief of severe backache, occipital headache and pain in both ovarian regions.

Laparotomy was done and showed there had been no attempt at coalescence of Müller's ducts; instead of uterus or vagina, there was simply a cord leading from one ovary to the other. Double ovariotomy was performed, and three weeks later patient left the hospital free from pain. She remained well for six months; since then we have not heard from her.

CASE IX.—M. W., U. S., 23, single, menses began at 16, recurred regularly every 28 days, for six days, profusely and painfully. She came for menorrhagia, dysmenorrhea and pain in both ovarian regions and back, sharp and lancinating in character, and of increasing severity.

Diagnosis of chronic salpingo-oöphoritis was made and laparotomy advised. Three days later the abdomen was opened and both ovaries were found chronically inflamed and conservative operation was done on both; a right-sided hydrosalpinx was removed, and a Dudley operation upon the left tube done. The uterus was found to be duplex. The appendix was normal and not removed.

The patient was discharged in three weeks, but six months later she returned with all symptoms aggravated, except that she did not flow so profusely. Vaginal hysterectomy was done. The patient made a perfect recovery, has remained well, and is in better health to-day than she has ever known.

CASE X.—Shows a medical curiosity rather than a case giving symptoms and requiring treatment.

Mrs. W., 37 years, U. S., married ten years, the mother of four children, the youngest two years, had one miscarriage ten months ago; had been ill for one month when seen.

The usual symptoms of inflamed cyst and the presence of a mass in the abdomen, tender and fluctuating, made a diagnosis comparatively easy. Laparotomy was done and tube and ovary were removed. Exploration of the other side for further trouble revealed the absence of ovary and tube; a small blind tube, about half an inch in length, extending from the uterine cornu, was Nature's attempt at ovary and tube. The convalescence was uneventful.