Therapeutic drainage in one hundred and eighty-five cases of uterine obstruction : presenting a new fenestrated rubber uterine drain / by A. Ernest Gallant.

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THERAPEUTIC DRAINAGE IN ONE HUNDRED AND EIGHTY-FIVE CASES OF UTERINE OBSTRUCTION,

PRESENTING A NEW FENESTRATED RUBBER UTERINE DRAIN.*

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EVERY normal woman is provided with a uterus and adnexa, instinct with a trinity of purpose, secretion, reception, and expulsion. The unalloyed enjoyment and fulfillment of these functional activities depend primarily on the free and unobstructed egress of the secretions and ingress of the human seedling wending its joyous way to the ovular rendezvous. Unfortunately for many women, obstructions bar the way, and the excretions are dammed back; bacterial growth, resorption of toxins, septicemia, and disturbance of the whole economy takes place, and life itself may be threatened or even sacrificed.

Obstruction to menstruation was the most frequent and principal symptom, in this series of 185 cases, and associated with the following conditions:

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	Ante-flexion Cervix.	Retro-flexion Body.	Fixation.	Retro-version.	Totals.
Dysmenorrhea—Before.	13	1	5	7	26 times
During.	23	3	9	16	51 times
After..	2	0	6	7	15 times
Menorrhagia	12	0	6	7	25 times
Metrorrhagia	3	0	2	5	10 times
Totals	53	4	28	42	127 times

Intermenstrual Obstruction.—While we all agree as to the importance and desirability of facilitating women in their laudable desire to become mothers, and are ready to execute measures for the regulation of menstrual irregularities and excesses, but too few seem to realize the great detriment to girls and women of the tortures of dysmenorrhea and the dangers of intermenstrual obstruction.

Physically what can be more distressing to the young girl whose first menstruation is announced by severe abdominal cramps with loss of blood, especially when she is taught to look forward to its regular recurrence, as to a horrible nightmare, a part of the "curse" which each woman must bear, and from which she can obtain relief only by violation at the hands of the surgeon. Psychologically she is oftimes undone, her mind being unduly centered on her sexual apparatus, curiosity leads to palpation, tittilation, masturbation, and may end in ruination.

For the obstructed uterus there is no rest, during the whole twenty-four hours of the three weeks, more or less, of the intermenstrual period. After menstruation ceases the uterus remains congested, an excess of mucus is secreted, accumulates in the uterus and must be expelled by frequently repeated contractions, bringing about muscular hypertrophy, thickening of the walls, and a dilated cavity. The

heavy organ dragging on its ligamentous attachments excites numerous aches and pains.

It is our firm conviction, based upon careful study of several thousand women, that intermenstrual uterine obstruction is far more productive of chronic pelvic disease than the more readily recognized discomfort, distress, or actual suffering during menstruation, and is the real reason for this effort to interest you in the special plan of treatment which has been carried out in this series of 185 cases.

Obstruction and Reproduction.—Obstruction causing sterility occurred in 57 cases, primarily in 19, and secondarily in 13 who had been pregnant and borne children, miscarried, or both; with 24 in whom fecundity had not been recorded.

From a mechanical standpoint sterility was associated with version 26 times; fixation, 28 times; anteflexion of the cervix, 29 times, and retroflexion of the body, 3 times. Of other conditions prohibiting conception, there were two cases of septate hymen, two of hyperesthesia of the hymen, necessitating removal, and one of excessive coitus. In two husbands no spermatozoa could be found.

While we know that the treatment of twenty-eight sterile women has given forty-six children and two miscarriages, the sequelæ in this class of cases may not always accord with what had been hoped for, as in the case of Mrs. McG., a patient of Dr. T. T. Gaunt, who in March, 1899, was curetted, a drain inserted, and the uterus supported with a pessary. Three months later (July) a large hematoma was removed by celiotomy and found to have been caused by rupture of a left-sided tubal pregnancy. January 15, 1900, the celiotomy was repeated for the removal of a large, multilocular

ovarian cyst on the right side; all within ten months. The patient has been well ever since, but deplores the loss of procreative power.

Obstruction and Retention, with well-marked evidences of infection after premature expulsion of the fetus, occurred in 34 cases (5 abortions, 12 miscarriages, 1 premature labor, 5 puerperal sepsis, 11 retained secundines), which were all drained, effectually demonstrating the notable efficiency of the drain in overcoming retention, absorption, and toxemia, as shown by the rapid subsidence of all symptoms within thirty-six hours of its introduction, with or without curettage, and the early rise of temperature, pulse, and respiration if the drain was prematurely withdrawn.

Obstruction vs. Pain and Headache.—Pain, to the patient at least, is the one thing to be relieved, and demands of us that it be traced to its source. Referred pain and headache were complained of and associated with the subjoined conditions:

Pain—Associated with Referred to the—	Ante-flexion.	Retro-flexion.	Fix-ation.	Retro-version.	Total.
Abdomen	3	1	0	1	5
Iliac region	10	0	6	8	24
Sacrum	12	2	11	19	44
Hips	2	1	0	4	7
Thighs	4	2	3	0	9
Knees	3	1	1	0	5
Legs	0	0	1	0	1
Totals	34	7	22	32	95

Pain—Associated with Headaches—	Ante-flexion.	Retro-flexion.	Fix-ation.	Retro-version.	Total.
Vertex	3	0	2	1	
Frontal	1	0	0	2	3
Supraorbital	0	0	1	0	1
Temporal	1	0	0	1	2
Occipital	1	0	1	2	4
Totals	6	0	4	6	16

Sacral pain, the most frequent, the most prominent symptom (44 of 95), and the most constant seat of the suffering, was due to inflammatory changes in the uterosacral ligaments, adhesions in the pelvis following localized peritonitis, and the increased size and weight of the heavy, congested, hypertrophied uterus dragging thereon. On the other hand, it was always necessary to exclude the urethra and bladder, the anus, and rectum as the possible seats of the disorder.

Iliac pain in twenty-four instances was associated with similar conditions and led to drainage of the uterus, with appropriate surgery on the tubes and ovaries. The relief of persistent headache, as a reflex indication of flexion, version, or fixation, presents the most gratifying results following drainage and restoration of the uterus to its normal position.

Version and Obstruction.—From a mechanical standpoint the uterus may be likened to a bottle, lying in a nearly horizontal plane, upon the pelvic diaphragm. Under normal conditions, varying with the quantity of urine in the bladder, the uterus rotates backwards within a radius of 90°, its anterior surface being always in contact and resting against the bladder wall. Whenever, congenitally, through trauma or as the result of the dorsal posture during the puerperium, etc., the uterus turns backward and fails to rotate forward, it more nearly resembles a bottle with its mouth uppermost. Under these conditions, during menstruation it must first fill, then overflow, and the clots be expelled by uterine contractions—dysmenorrhea. This state of affairs was present in forty-two cases, and not infrequently in connection with anteflexion of the cervix, of which there were fifty-three instances. After the uterus had been rotated forward, un-

twisting the broad ligaments and restoring normal drainage, painless menstruation was established, the congestion diminished, the hypertrophied organ involuted, the bearing down ceased, the headache disappeared, and the patient was cured, symptomatically, so long as the uterus was supported by a suitable pessary inserted with the broad end resting behind the symphysis, and the drainage was free. (*Philadelphia Medical Journal*, May 2, 1903.)

Obstruction and Fixation were associated in twenty-eight cases as the result of pelvic peritonitis' pus tubes, or thickening of the uteroscral ligaments. Whenever possible, the uterosacral ligaments were gradually stretched after the plan of Thure Brandt, or forcibly elongated under anesthesia, adhesions broken up, and the freed uterus maintained by a pessary. When this plan was impractical, when pus tubes were present, or adhesions could not be separated by these means, as in twenty-two cases, celiotomy was done, and if necessary the uterus was suspended after the plan of G. J. Jarman, by suturing a loop of the redundant round ligaments directly to the abdominal wall, and of the sixteen cases but one failed, a syphilitic, in whom catgut instead of silk or cotton sutures were employed.

Obstruction furnished its quota of mortality, three deaths in 185 cases now under consideration:

Case I.—Postpartum sepsis and pneumonia. Mrs. S., patient of Dr. Davin. When seen, the eighth day after miscarriage, the soft, flabby, immobile uterus nearly filled the pelvis. Skin jaundiced. Both lungs congested posteriorly. Considerable débris scraped from the uterus, which under potassium permanganate irrigation contracted. Gauze packing introduced. No anesthesia. Hypo-

static (?) pneumonia increased and death occurred on the eleventh day after miscarriage.

Case II.—Postpartum septicemia. Mrs. McG., outpatient of the Mothers' and Babies' Hospital. Curettage the eighth day after labor, without anesthesia, brought away placental shreds, from the five-and-a-half-inch, flabby uterus, which did not contract. She died in profound sepsis one week later, the fifteenth day postpartum. (*Medical Journal*, New York, August 11, 1906.)

Case III.—Pneumococcemia. E. S., a physician's daughter, virgin, had been troubled with an irritating vaginal discharge for some months, also dysmenorrhea and fissure in ano. Under ether, dilatation of the hymen disclosed a follicular vaginitis. Cervix dilated and gold drain introduced; ichthyol gauze pack in the vagina. On the fifth day, when dressed and ready to go home, she had a severe chill, temperature 103° F. Five days later blood drawn from the median basilic vein, and smears from the vagina and cervical canal, taken by Prof. Ellsworth Elliott Smith, showed pure cultures of pneumococci. Locally, there was only a small area of slough around the external os. Without developing any other demonstrable lesion elsewhere, she died on the nineteenth day after the initial chill.

Summary of treatment for the permanent relief of uterine obstruction:

(a) In case of obstruction, with or without flexion, evidenced by pain when passing a sound through the internal os, by a typical menstruation, by sterility, or by intractable headache, the cervix must be dilated to 38F., the cavity curetted and irrigated, and a bivalve or fenestrated drain sutured into the cervix, there to remain for from four to six months.

(b) When obstruction is associated with sepsis following abortion, miscarriage, or labor, in addition to the three-inch drain which has been inserted, a roll gauze wick (Fig. 1) must be introduced into the vagina and made long enough to protrude between the labia so as to come in contact with the vulvar pad, thus establishing continuous drainage from the interior of the uterus to the outside pad, a very important factor in the prevention of vaginal absorption and toxemia.

(c) When obstruction is combined with version

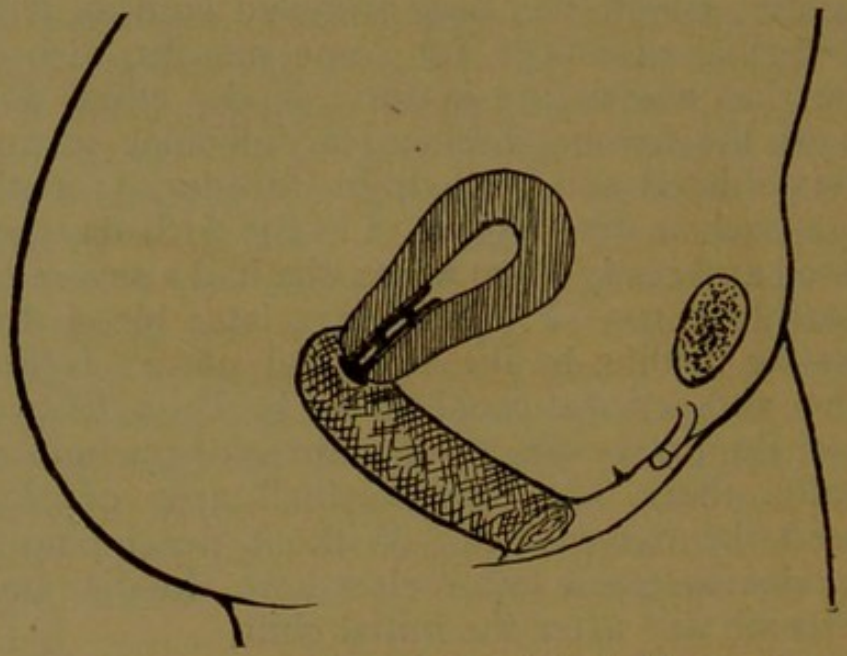

FIG. 1.—Fenestrated rubber uterine drain in the cervix; a roll gauze wick in the vagina.

the fundus must be rotated forward and supported by an Albert Smith pessary, inserted broad end down and resting under the symphysis.

(d) Shortened, tender uterosacral ligaments and adhesions may be gradually stretched after the plan of T. Brandt, or forcibly loosened under anesthesia; these means failing, resort must be had to vaginal or abdominal celiotomy to free the uterus,

and if need be resection of the adnexa, and suspension of the uterus by the round ligaments.

(e) In married nullipara, or those who have been sterile for years and are approaching the time of their probable menopause, carrying a heavy, displaced, adherent uterus, hysterectomy offers the one plan for permanent relief and cure.

(f) Trachelorraphy has been practised in a few instances of deep laceration into the fornices, and where the cervix was greatly hypertrophied and cystic, but amputation has been abandoned, as it shortens and removes a part absolutely essential to the support of the uterus in its normal position. Perineorrhaphy should be done whenever the peri-

FIG. 2.—The fenestrated rubber uterine drain.

neum resembles the web between the thumb and forefinger, viz., two layers of skin without any muscular structure between.

The bivalve drain first described in the MEDICAL RECORD, November 22, 1902, is made of the two halves of a split tube, united to a cuplike base, separated one-eighth of an inch on the sides, to permit the cervical mucus to flow into the drain, mingle with the uterine excretions, prevent clotting and plugging of the drain and providing an unobstructed outlet to blood, lochia, and mucus every minute of every hour of every day of every month while it is worn, and finally restoring the cervix to its normal shape and caliber. This incessant drain-

age promotes involution and atrophy of the hypertrophied uterus, stops dysmenorrhea, regulates menstruation, and if established early in septic cases, will bring about rapid subsidence of all the symptoms of infection. (*New York Medical Journal*, August 11, 1906.)

The fenestrated rubber uterine drain (Fig. 2., Tiemann & Co.) has these advantages: It is not corroded by the acid vaginal secretion, as is the silver or gold-plated drain, is more easily introduced, and stays in place better; but it cannot be boiled without losing its cervical curve, really a matter of minor importance.

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