Total Treatment of Endometriosis

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Any discussion of endometriosis would be incomplete without an acknowledgment of the exceptional contributions Joe Vincent Meigs made to our understanding of this clinical entity. From the time of our founding member's first published paper (Meigs, 1922) until his death, he was a contributor to our understanding of this disease. It was Meigs, who in his first publication pointed out the "atrophy" of endometriosis that occurred during pregnancy and lactation. In spite of this exceedingly important observation, 44 years ago, endometriosis was often treated like a malignant lesion. However, clinical understanding has led to the increasing use of conservative measures. It is no longer common to find ourselves at the dead-end of gynecological therapy for endometriosis, viz., total hysterectomy and bilateral salpingo-oophorectomy in young women.

To determine how successful conservative measures have been in preserving pelvic function as well as helping to bring about a symptom-free patient, we have turned to actual clinical material.

Material

This series comes from the records of private patients whose charts were taken from our files in a sequential manner. To assess the results adequately, we used only the records of those women who have been cared for at least three years and whose visits were never more than six months apart. Our goal was 100 cases; the charts of 123 were searched in order to reach this number. Accordingly, all figures are either percent or total number.

Clinical Picture

In table 1 are listed the age and pregnancy incidence. Forty-five of the 100 women were without living issue; however, only 21% listed infertility as a chief complaint (table 2).

Table 3. A variety of gynecologic symptoms were presented by these women. Often they seemed unrelated to the extent or location of the disease. Pain was the chief problem, often accompanying other symptoms, while dyspareunia and rectal tenesmus, so very common, never appeared alone. Seven women had no complaints from advanced endometriosis.

To minimize descriptive words, yet portray a reasonably accurate picture of the extent of endometriosis, we use the classifications cited in table 4 (Beecham, 1966).

Ninety-six patients fitted into this system of classification (table 5). Solitary, isolated lesions do not lend themselves to our classification; in this series there were four such cases. Stages 2, 3, and 4 were so categorized by pelvic examination or palpable-visual findings at operation.

Table 6 shows the associated lesions found at surgery. To what extent associated pathology influenced the clinical picture is not altogether clear. Surely the 18 women with fibroids and endometriosis would be expected to have extensive complaints; however, to ascribe specific symptoms to each entity would be an inventive exercise.

Treatment

Since this is a disease of the reproductive years, every attempt was made, within reason, to follow a conservative therapeutic program. Basically, to us, this means the preservation of childbearing capacity at one end of the spectrum and the prevention of an untimely surgical menopause at the opposite end of the scale.

In order to follow such a program, we used various hormonal preparations in definite programs, with and without surgery (table 7).

The creation of a pseudopregnancy—10 months of amenorrhea—using stilbestrol was one method. In principle, ascending doses of this synthetic estrogen was administered in such a manner as to maintain amenorrhea. To accomplish this, on the average, 250 to 300 mg per day were required in the tenth month of treatment.

In like manner the progestins may be used in sufficient dose to maintain amenorrhea. In some patients, the accepted dose schedule used for contraception will suffice to keep the patient symptom-free and over a period of time will cause atrophy or remission of the lesions.

Surgical procedures employed were as conservative as possible under the age of 35; we do not believe the chances for conception are particularly good above that

level. Surgery was used in the impatient woman ill-suited to medication regimens, and where time was running out on the optimum fertility age.

If a woman had her family or if there seemed little chance of conception, a complete hysterectomy was performed. Every attempt was made to salvage both ovaries unless the patient was near the menopause. In general, these ovaries, although involved in the endometriotic process, were not resected, but simply left alone except for the movement necessary to perform a hysterectomy.

Results

Stilbestrol as the only treatment was successful in causing remission (10 or more years) in nine women (table 8). Four of these conceived following treatment. In two patients, three courses of stilbestrol were required; one of these is worth special mention. A 22-year-old infertile patient with massive (Stage 4) endometriosis was given three courses of stilbestrol over a 16-year period, during which time she delivered four term infants. At age 40, advanced adenomyosis caused uncontrollable bleeding and a hysterectomy was necessary.

There were six women in whom endometriosis recurred from one to three years following one course of stilbestrol. They did not wish to try the method again mainly for two reasons: the inconvenience or annoyance of taking a handful of pills daily and the copious clear mucous discharge from the cervix. In these, conservative surgery, i.e., ovarian resections, neurectomies, and suspensions, were carried out. All of these had Stage 2 or 3 endometriosis so that the broad ligament and cul-de-sac involvement needed further control. The intermittent use of the common progestins in the usual dose carried these women; four conceived.

Finally there were two women in whom progestins relieved all

TABLE 1
Age and Pregnancy History in 100 Patients with Endometriosis

Average age at first visit	34
Number who had term pregnancies before problem	55
Total term pregnancies in the 55 women	118
Unmarried	3

TABLE 2
Incidence of Infertility as the Chief Complaint in 100 Patients with Endometriosis

Infertility alone	6
With dyspareunia	4
With pelvic pain	6
With dysmenorrhea	2
With meno-metrorrhagia	3
Total	21

TABLE 3
Other Chief Complaints in 100 Patients with Endometriosis

Dysmenorrhea	8
Menorrhagia	5
Metrorrhagia	8
Meno-metrorrhagia	2
Lower abdominal pain or pelvic pain	17
Dyspareunia and rectal tenesmus alone	0
Premenstrual fever	1
Postmenopausal bleeding	1
Combination of abdominal-pelvic pain and one or more of above symptoms	30
No complaints—endometriosis found on check-up	7

TABLE 4
Classification of Endometriosis

Stage 1. Scattered, small (1- to 2-mm) spots anywhere in the pelvis. Diagnosed only at laparotomy.
Stage 2. Uterosacral ligaments, broad ligaments, cervix, and ovaries are, collectively or individually, fixed, tender, nodular, and slightly enlarged.
Stage 3. Same as Stage 2, with ovaries at least twice normal size; uterosacral ligaments, rectum, and adnexa are confluent. Cul-de-sac is obliterated.
Stage 4. Massive involvement. Internal pelvic viscera cannot be clearly distinguished by palpation.

TABLE 5
Extent of Endometriosis in 100 Patients

Stage 1	11
Stage 2	37
Stage 3	34
Stage 4	14
Tubal	2
Cervix	1
Vulva	1

TABLE 6
Associated Lesions Found at Surgery

Fibroids	18
Pelvic inflammatory disease	3
Adenomyosis	3
Tubal fibroma	1
Mucinous cystadenoma	1
Acute suppurative appendicitis	1

complaints. The disease would regress somewhat and maintain an asymptomatic softness as long as the cyclic treatment was maintained. Even one menstrual cycle without the medication brought loud complaints. Obviously no pregnancies occurred here.

In 80% of the women, surgery had a major role in the therapeutic plan. In 32%, conservative surgery was desirable and possible (table 9). Of these 20 had previous pregnancies and wanted more; nine subsequently conceived. In almost all of these 32 women, hormonal preparations were used postoperatively usually to control the cul-de-sac involvement.

Total hysterectomy with ovarian conservation was carried out in 38 women whose average age was 40.3 years and who had delivered 58 infants. The conserved ovary was a source of trouble in one patient, i.e., she developed a serous cystadenoma one year following her hysterectomy. Two women, several months following hysterectomy and ovarian regression had a recurrence of adnexal enlargement.

TABLE 7
Treatment

None (regular check-ups)	7
Hormonal combinations	13
Hormonal combinations and surgery	80

TABLE 8
Results of Treatment with Stilbestrol Only

No. of Courses	No. of Patients Treated	Results
1	15	Remission in 9 (4 conceived)
		Recurrence in 6 (1 to 3 years)
3	2	No recurrence 5 years later
		1 conceived 4 times

TABLE 9
Results of Conservative Surgery

Surgical Procedure	No. of Patients	Results	
		Previous Pregnancies	Subsequent Pregnancies
Resection, neurectomy, etc.	28	20	9
Salpingectomy	2	5	0
Local excision, vulva	1	2	0
Local excision, cervix	1	3	0

Testosterone (100 mg) caused the enlargement to disappear promptly.

Ten women with an average age of 46.7 years and who had 22 term deliveries were treated by total hysterectomy and bilateral removal of the adnexa.

Summary

Impaired fertility as one of the problems associated with endometriosis has been known for a long time. Forty-two percent of the married women in our series had never conceived; however, of these, only half made this a major complaint.

Five of eleven women treated by stilbestrol alone conceived; two, more than once. Nine of 28 women conceived following combined hormonal and surgical treatment. Two of seven women with Stage 3 and 4 endometriosis, all without complaints or treatment, also conceived.

In summary, twenty women out of fifty-two (38.5%), those who did not have a hysterectomy, conceived.

About one-half of the women with endometriosis came for treatment at a time in life when further pregnancies were not desirable or at an age of low fertility. In those, hysterectomy was the treatment of choice. Ovarian preservation was found to be worthwhile and not dangerous.

Satisfactory results were obtained by using a variety of hormonal preparations and differing administration schedules, with and without conservative surgery. The entire group of 100 women reflected highly individualized treatment.

References

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