

## Danazol in the Treatment of Vesical Endometriosis

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Endometriosis is the presence and growth of normal endometrial tissue in an ectopic site. Cases of endometriosis that are clinically significant occur in 15 to 30 percent of premenopausal women; thus, the condition is encountered often in family and gynecologic practices. The disease usually involves the adjacent pelvic organs (uterine ligaments, rectovaginal and vesicovaginal septa, and ovaries).

Judd<sup>1</sup> reported the first case of bladder endometriosis in 1921. Recent investigations have concluded that it occurs rarely.<sup>2-4</sup> Several reviews of the literature on vesical endometriosis are available,<sup>2,5,6</sup> as are reports on treatment.<sup>3,4,7</sup> Vesical endometriosis has been treated surgically with local excision and segmental bladder resection, oophorectomy, or both; with radiation; and with hormones. A case of endometriosis of the urinary bladder is presented in which amelioration of symptoms and a reduction in size of the endometrioma was accomplished using danazol.

### Case Report

A 27-year-old woman (gravida 2, para 2) came to the Family Medicine Clinic in October 1982 complaining of lower pelvic pain and cramping that occurred during menstruation. She reported that her symptoms began soon after she under-

went a bilateral tubal ligation in June 1979 and that they were sometimes so severe that she required treatment in the emergency room. A physical examination, including pelvic examination, yielded normal results. A review of her hospital records indicated that she had been seen in the emergency room at least five times in the previous two years because of various symptoms, including dysuria, hematuria, and lower abdominal and pelvic pain. Urinary tract infections had been found during four of these visits. *Escherichia coli* was isolated on three of these occasions, and *Klebsiella pneumoniae* was isolated once.

The patient was given ibuprofen for her dysmenorrhea, but the cyclical pain continued. On follow-up examination, the patient was found to have pyuria again. Because of the frequency of the urinary tract infections, an intravenous pyelogram was performed, and a nodular filling defect was noted at the base of the bladder. A pelvic ultrasonogram indicated the presence of an irregular, echodense lesion (2 × 6 × 5 cm) that arose from the posterior wall of the bladder and did not move with gravity (Figure 1).

The patient then underwent a cystoscopic examination. A large exophytic mass was observed at the base of the posterior portion of the bladder. The mass extended from the left to the right ureteral orifices, and the bladder mucosa overlying the mass was edematous and erythematous. A biopsy was performed and the lesion was identified as an endometrioma.

Danazol therapy was begun (200 mg, two times a day). On this regimen, her menses ceased and her symptoms were relieved completely.

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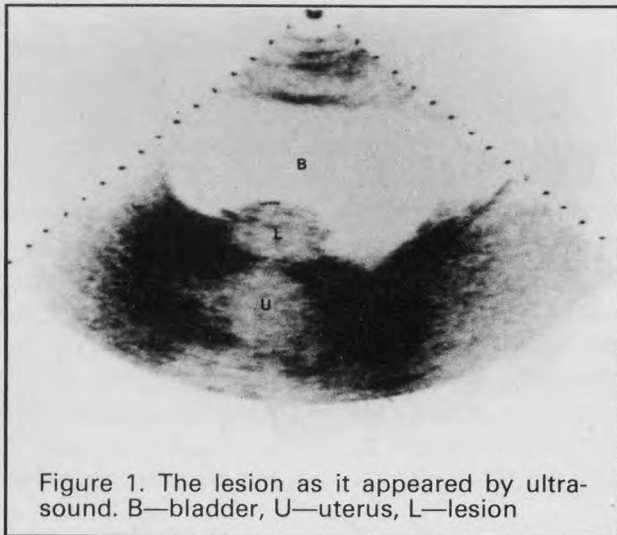


Figure 1. The lesion as it appeared by ultrasound. B—bladder, U—uterus, L—lesion

During the course of her treatment the patient elected to have a total hysterectomy and bilateral salpingo-oophorectomy. She was readmitted to the hospital four months after starting danazol, at which time a second cystoscopic examination was performed. The tumor was still present in the intertrigonal area, but was much less erythematous and had decreased in size by at least 75 percent. The ureteral orifices could now be seen easily. At laparotomy, no endometrial implants were noted in the pelvis. Two small areas that appeared as healed scars were noted on a segment of small bowel and may have represented healed endometrial sites.

## Discussion

In classical vesical endometriosis, patients usually have dysuria or suprapubic discomfort that is related temporally to the menstrual cycle. Hematuria is found occasionally, and menstrual disturbances (dysmenorrhea, metrorrhagia, menorrhagia) are present often. Pyuria and urinary tract infections are uncommon, but were prominent features in this case.

Bladder endometriosis is usually treated surgically by either segmental bladder resection (if reproductive capacity is to be preserved) or oophorectomy,<sup>3</sup> although successful treatment with large doses of androgens,<sup>8</sup> estrogens combined with androgens,<sup>2</sup> and norethynodrel with mestranol (Enovid)<sup>3</sup> have been reported.

Since the mid-1970s, danazol has been mar-

keted for use in the management of endometriosis. The agent, a 2,3-isoxazol derivative of 17-alpha-ethinyl testosterone, has been reported to have an antigonadotropic effect,<sup>9</sup> although the exact mechanism is not known. The clinical use of danazol is still being evaluated,<sup>10,11</sup> but it appears to be the most effective form of medical therapy for endometriosis now available.<sup>10</sup>

This case, the first report of the use of danazol in the treatment of a bladder endometrioma, demonstrates its efficacy in the treatment of such a lesion. The patient was begun and maintained on 400 mg/d, and at this dosage her menses were arrested and her symptoms ceased. The decision to start at this dosage regimen was based on two premises. The 400 mg daily dose is less expensive than the recommended 800 mg dose, and the aim was to try to balance cost and effectiveness. Second, some authors<sup>10-12</sup> now believe that a lower daily dose of danazol may be as efficacious as the 800-mg dose. Also reported in the literature is the successful treatment of extraperitoneal endometriosis using 600 mg of danazol daily.<sup>13</sup> In this case, the second cystoscopic examination revealed an excellent objective response to this therapy. That a lesion of this size responded dramatically to a less than maximal dose of danazol is noteworthy.

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