Long-Term Results of Endometrial Ablation-Resection

Rafael Comino, Ph.D., Rafael Torrejón, M.D., and Inmaculada Sánchez-Ortega, M.D.

Abstract

Study Objective. *To estimate long-term (>5 yrs) results of endometrial ablation-resection performed in women with abnormal uterine bleeding (AUB).*
Design. *Retrospective study (Canadian Task Force classification II-3).*
Setting. *University-affiliated hospital.*
Patients. *Fifty-five women.*
Intervention. *Endometrial ablation-resection by electrocoagulation with a rollerball of the uterine fundus and zone of tubal ostia, followed by electrodissection with a cutting loop of the rest of the uterine cavity.*
Measurements and Main Results. *At 5 years after the procedure the success rate was 81.8%. Of 10 women in whom the procedure failed, hysterectomy had to be performed in 6 (10.9%) for recurrent AUB. Of 55 patients, 47 were followed for 6 years for a success rate of 85.1%, 36 were followed for 7 years with a success rate of 83.3%, and 20 were followed for 8 or more years with a success rate of 80.0%.*
Conclusion. *Endometrial ablation-resection achieved a success rate of 81.8% at 5 years, and this percentage remained fairly stable throughout the following 4 years. Taking into account only cases of AUB without other organic pathology, the rate was close to 90%. In women with a relatively large uterus (≥10 cm), those with myomas or polyps, and patients with dysmenorrhea, the success rate tends to be lower.*

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Endometrial ablation-resection (EA-R) is a common procedure for treatment of abnormal uterine bleeding (AUB), and the literature on the topic is extensive.[1–3] In most published studies, follow-up did not reach 5 years. With shorter average follow-up, success rates ranged between 80% and 90%; few articles described follow-up of 5 years and more.[4–11]

Materials and Methods

We reviewed clinical records of 55 women (mean age 44.6 yrs, range 35–54 yrs; follow-up 5–9 yrs) who underwent EA-R for AUB between 1991 and 1995. Before the intervention all patients were administered two injections of tryptoreline 3.75 mg in successive cycles. Ablation-resection was performed between 15 and 20 days after the second injection.

Operative Technique

The uterus was distended with 1.5% glycine by means of an automatic pump. Rollerball electrocoagulation of the uterine fundus and zone of the tubal ostia was followed by electroresection of the rest of the uterine cavity with a cutting loop using a resectoscope. Cutting power for the electrosurgical unit was 100 W (blend 1) and coagulation power was 70 W. When uterine polyps or myomas were present, they were resected in the same intervention. All resected tissue was benign on pathologic analysis.

From the Department of Obstetrics and Gynecology, Puerto Real University Hospital, and School of Medicine, University of Cadiz, Cadiz, Spain (all authors).

Address reprint requests to Rafael Comino, M.D., Servico de Obstetricia y Ginecologia, Hospital Universitario de Puerto Real (Cádiz), Carretera Nacional IV, KM 665, Puerto Real, Cadiz 11008, Spain; fax 34 956 005 668.

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The intervention was considered successful when the patient remained amenorrheic or hypomenorrheic and reported being satisfied with treatment. Otherwise it was considered a failure.

Three women retained more than 1500 ml of glycine (in 1 of them, more than 2000 ml). These complications were satisfactorily resolved in the immediate postoperative period.

Statistical analysis was by Fisher's exact test.

Results

At 5 years the overall success rate was 81.8% (Table 1). Of 10 women considered failures, 6 underwent hysterectomy for recurrent AUB.

Table 2 presents the results in terms of length of follow-up and patient age at the time of intervention. No differences were seen when analyzing cases by uterine size measured by ultrasonogaphy before administration of tryptoreline (Table 3), although we observed a marked tendency toward a higher failure rate when uterine size was greater than 10 cm. In all women whose uterus was larger than 10 cm, the size was 12 cm or less. We also evaluated the relationship between success and preoperative dysmenorrhea. Although differences were again not significant, the failure rate increased in women with dysmenorrhea (Table 4).

Finally, we grouped women according to uterine pathology (Table 5). Fifteen women had uterine myomas and 13 had endometrial polyps. Although statistically significant differences were not found, the percentage of failures was higher in patients with than in those without concomitant endouterine pathology.

TABLE 1. Long-Term Results of Endometrial Ablation-Resection

Length of Follow-up (yrs)	No. of Patients	No. (%) of Successful Cases
5	55	45 (81.8)
6	47	40 (85.1)
7	36	30 (83.3)
≥8	20	16 (80)

TABLE 2. Long-Term Results by Patient Age

Length of Follow-up (yrs)	No. (%) Successful, Age <45 Years (n = 23)	No. (%) Successful, Age >45 Years (n = 32)
5	19 (82.6)	26 (81.2)
6	17 (85)	23 (85.1)
7	13 (81.2)	17 (85)
≥8	5 (83.3)	11 (78.5)

Differences are not statistically significant by Fisher's exact test.

TABLE 3. Long-Term Results by Uterine Size

Length of Follow-up (yrs)	No. (%) Successful Cases Uterine Size <10 cm (n = 38)	No. (%) Successful Cases Uterine Size >10 cm (n = 17)
5	32 (84.2)	13 (76.4)
6	30 (88.7)	10 (76.9)
7	23 (85.2)	7 (77.7)
≥8	12 (85.7)	4 (66.6)

Differences are not statistically significant by Fisher's exact test.

Discussion

In articles reporting long-term follow-up (at least 5 yrs) published to date,[4–11] success rates ranged between 67% in 41 patients having rollerball endometrial ablation followed for 5 years,[6] and 80% in 37 women operated on with loop and ball.[7] Of particular note is the success rate of 77.5% at 7 years in 62 women having loop endometrial resection.[4]

Thirty-nine women (age range 41–55 yrs) who underwent rollerball endometrial ablation were

TABLE 4. Long-Term Results by Presence or Absence of Previous Dysmenorrhea

Length of Follow-up (yrs)	No. (%) Successful Cases without Dysmenorrhea (n = 38)	No. (%) Successful Cases with Dysmenorrhea (n = 17)
5	33 (86.8)	12 (70.5)
6	28 (87.5)	12 (80)
7	22 (88)	8 (72.7)
≥8	13 (81.2)	3 (75)

Differences are not statistically significant by Fisher's exact test.

TABLE 5. Long-Term Results by Pathology

Length of Follow-up (yrs)	No. (%) Successful Cases with AUB Only (n = 27)	No. (%) Successful Cases with AUB plus Endometrial Polyps or Myomas (n = 28)
5	24 (88.6)	21 (75)
6	22 (91.6)	18 (78.2)
7	18 (90)	12 (75)
≥8	9 (81.8)	7 (77.7)

Differences are not statistically significant by Fisher's exact test.

followed for between 5 and 6 years.[12] Two of them required hysterectomy, one for irregular bleeding and one for pain due to endometriosis. Nine patients reached menopause and of the remaining 26 nonmenopausal women, 12 (46%) had amenorrhea and 14 hypomenorrhea. These are excellent results, with a success rate of 95%; but it must be stressed that in all these patients uterine bleeding was functional through anovulatory cycles, whereas in other women with associated pathology such as endometrial polyps, myomas and adenomyosis were also present. A review of 398 EA-Rs showed that 86.2% of patients were satisfied with the treatment, although follow-up varied among groups included in this total.[13]

Our results compare well with those reported in the literature and could be considered better, since at 5 years the success rate was 81.8%, and if we consider only cases without organic pathology, it is 88.8%. We found that once the 5-year time point was exceeded, the rate usually remained stable, although it fell somewhat at 8 or more years.

On analyzing the data with respect to factors that could influence the results, patient age at time of intervention was not significant. This is contrary to the opinion of other authors, who stated that the failure rate is higher among younger patients, particularly those below 40 years,[9,14–19] which seems logical. The only explanation we can find is that our results are biased by the relatively few patients under age 40 years (4).

No statistically significant differences were found with respect to other factors analyzed, although there was a marked tendency toward failure with large uteri, a finding frequently confirmed by others.[8,16,17–21] Similarly, we had less success in women with polyps or myomas, as did other authors,[8,16,17,20] and in those with dysmenorrhea, although not statistically significant, as shown in another report.[18] Thus our results are generally in agreement with those in the literature, except with respect to age, which we explain by the limited number of our patients under age 40.

Of six (10.9%) hysterectomies performed after EA-R, four were done in the first year, one at 2 years, and one at 4 years. Thus most of them were performed soon after ablation, which also agrees with the literature.[18,22] In fact, the one hysterectomy performed at 4 years was perhaps due more to pelvic pain caused by endometriosis than to uterine bleeding. In two of these patients, myomas were present at hysterectomy; another had a double uterus and EA-R probably was not performed correctly. Due to difficulties that arose during the intervention, complete resection of one hemiuterus and partial resection of the other hemiuterus were performed. Most women, however, did not require hysterectomy, either because they considered improvement with EA-R acceptable, or because they rejected hysterectomy.

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