

## Hysterectomy for AUB: Better short-term outcomes than medical therapy

Kuppermann M, Varner RE, Summitt RL, et al. Effect of hysterectomy vs medical treatment on health-related quality of life and sexual functioning. *JAMA*. 2004;291:1447-1455.

### OBJECTIVE

To compare the effect of hysterectomy versus expanded medical treatment on health-related quality of life in premenopausal women with abnormal uterine bleeding (AUB).

### RESULTS

In this multicenter, randomized, controlled trial involving 63 women 30 to 50 years of age in whom medical therapy with medroxyprogesterone acetate had failed, those randomized to hysterectomy had greater improvement at 6 months in Mental Component Survey scores (8 vs 2;  $P = .04$ ). They also had greater improvement in symptom resolution (75 vs 29;  $P < .001$ ), symptom satisfaction (44 vs 7;  $P < .001$ ), interference with sex (41 vs 22;  $P = .003$ ), sexual desire (21 vs 3;  $P = .01$ ), health distress (33 vs 13;  $P = .009$ ), sleep problems (13 vs 1;  $P = .03$ ), overall health (12 vs 2;  $P = .006$ ), and satisfaction with health (31 vs 14;  $P = .01$ ).

### EXPERT COMMENTARY

This study is one of the first randomized studies to compare the effects of surgery versus medical management on quality of life. Unfortunately, participants were included only after 1 course of medical therapy had failed. Thus, although investigators avoided potential skewing of the results by excluding patients who respond-

ed easily to treatment, they also caused selection bias.

It also is likely that some of the patients randomized to medical therapy were frustrated after failing 1 course of therapy, which caused a large crossover group: 17 of 32 women in the medical-therapy group eventually underwent hysterectomy. A more accurate outcome may have resulted if all women initially presenting with AUB had been included.

### Shortcomings

Sample size was small, and did not reach the projected numbers even after the target sample size was officially decreased. Again, if investigators had randomized any patient initially presenting with AUB, more women might have been willing to participate. If the reason for the low numbers is that more women wanted to undergo surgical treatment after failing therapy with medroxyprogesterone acetate, researchers could have implemented a 2:1 randomization scheme to encourage higher enrollment in the study.

Although performing surgery without attempting medical therapy does not reflect typical management, it might have provided insight into whether medical management is worthwhile and yielded information on which option truly does lead to better quality of life.

Further, researchers compared each

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**Quality of life  
at 6 months  
improved more  
in the women who  
had hysterectomy.**

patient's quality-of-life scores to her baseline, which, in the medicine group, was after a mean of 4 years of treatment. Therefore, one would expect less of a difference between scores in the medicine group, since all women were already refractory to medroxyprogesterone acetate at the beginning of the study.

The large crossover from the medical management group makes it difficult to decipher what the outcome of the study really is, despite the intragroup analysis. This leads me to conclude that, at some point, most patients get tired of trying medications and want a guaranteed fast cure.

#### **No data on effects of hysterectomy route**

One area that should have been addressed and subanalyzed: whether the type of hysterectomy (36% abdominal versus 64% vaginal) had any effect on short- or long-term outcomes.

#### **Ablation option not included**

There is also another treatment option that was not addressed: endometrial ablation. This surgery typically has a quicker recov-

ery than hysterectomy and should correct the bleeding faster than medical management. It would be interesting to see the differences in quality-of-life and sexual-function outcomes with this option, compared with the others.

#### **BOTTOM LINE**

Until these issues have been thoroughly evaluated, women with AUB should initially be treated with medical therapy. Based on the preliminary screening study for this trial, medroxyprogesterone acetate appears to effectively control most patients' symptoms. However, when medical therapy fails, the physician should explain to the patient that the improved short-term outcome seen with hysterectomy does not necessarily translate into significant long-term quality-of-life outcomes, as this study points out. The final decision between medical management and hysterectomy thus should fall to the individual patient.

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**SHBG levels were lower in women who developed gestational diabetes mellitus.**

## **First-trimester levels of sex hormone binding globulin predict gestational diabetes**

*Thadhani R, Wolf M, Hsu-Blatman K, Sandler L, Nathan D, Ecker JL. First-trimester sex hormone binding globulin and subsequent gestational diabetes mellitus. Am J Obstet Gynecol. 2003;189:171-176.*

#### **OBJECTIVE**

To explore the association between first-trimester levels of sex hormone binding globulin (SHBG) and subsequent gestational diabetes mellitus.

#### **RESULTS**

SHBG levels were lower among women who subsequently developed gestational

diabetes than among those who didn't ( $187 \pm 82$  nmol/L versus  $233 \pm 92$  nmol/L;  $P < .01$ ). For every increase of 50 nmol/L in SHBG, the odds of gestational diabetes fell by 31% (odds ratio, 0.69; 95% confidence interval, 0.48-0.99).

#### **EXPERT COMMENTARY**

Gestational diabetes or glucose intolerance

first recognized during pregnancy complicates approximately 4% of all pregnancies, varying by population studied.<sup>1</sup> Although the best management strategy for these patients has yet to be determined, particularly for patients with only mildly elevated blood sugars, certain fetal and maternal risks are well documented. For example, women with a history of gestational diabetes face an increased risk for type 2 diabetes, with a lifetime risk of approximately 50%.<sup>2</sup>

This nested case-control study included 44 women documented to have gestational diabetes in the third trimester by the 2-step screening process (50-g screen followed by a 100-g glucose tolerance test in women with a positive screen of  $\geq 140$  mg/dL), as well as 94 women who had negative screening.

Serum samples that had been collected in the first trimester were examined to determine SHBG levels.

### Need for earlier detection

By definition, gestational diabetes includes women who—though they are first diagnosed during pregnancy—may have had varying degrees of glucose intolerance prior to conception.

Therapeutic intervention may benefit these women and their babies. Unfortunately, women traditionally are screened for gestational diabetes between 24 and 28 weeks' gestation, when many of the metabolic consequences have already occurred. Thus, investigators have attempted to find a method of earlier diagnosis and treatment.

### SHBG and insulin resistance

SHBG is a glycoprotein produced by the liver; it binds to circulating estradiol and

testosterone. Secretion is suppressed by insulin, and SHBG levels are inversely related to insulin concentrations and insulin resistance. Lower concentrations of SHBG are predictive of the development of type 2 diabetes.<sup>3</sup> During pregnancy, SHBG concentrations are lower in women with gestational diabetes and in those who require insulin therapy.<sup>4,5</sup>

### BOTTOM LINE

Measuring SHBG levels in the first trimester may allow earlier intervention or identify a population appropriate for earlier diabetes testing. However, although an association has been established between low first-trimester SHBG and the development of gestational diabetes, this marker has not been fully explored as a screening test. A larger prospective study is required to establish optimal cut points of SHBG for predicting gestational diabetes. ■

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**Measuring SHBG in the first trimester may allow earlier intervention for gestational diabetes.**