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FAST TRACK

Transcervical chorionic villus sampling may increase the risk of pregnancy loss when the placenta is near the cervix

Q Is chorionic villus sampling as safe as amniocentesis?

A Yes, according to this retrospective study, provided the practitioner has adequate training and experience. The authors analyzed 20 years of experience and found that the risk of pregnancy loss diminished over time for both test methods, but the reduction was more pronounced in women undergoing chorionic villus sampling (CVS). By the final epoch of study (1998–2003), there was no significant difference between the 2 methods.

EXPERT COMMENTARY

Richard K. Silver, MD, Professor of Obstetrics and Gynecology, Northwestern University's Feinberg School of Medicine, and Chairman, Department of Obstetrics and Gynecology, Evanston Northwestern Healthcare, Evanston, Ill

Caughey and colleagues launched their study to explore the following questions: What is the rate of pregnancy loss in women who undergo CVS and amniocentesis, compared with those who do not? Has the higher rate of pregnancy loss associated with CVS changed over the past 20 years?

That invasive diagnostic procedures have a learning curve is no surprise.[1] It generally follows that the more efficient an operator becomes at a given invasive test, the lower the rate of complications. The clinical question facing us after this study is how valid the comparison is between the 2 procedures, even in the final 5-year epoch.

Study design is laudable

Caughey and colleagues did an admirable job of compiling data on nearly 10,000 CVS tests and 31,000 amniocentesis procedures and their associated clinical outcomes. The fact that this investigation was based at a single center with good follow-up is a definite strength. Also laudable is the attempt to control for background loss rate by adjusting for gestational age at the time of sampling in multivariable analysis, as well as the identification of a control group that underwent neither test.

The investigators also restrain themselves from extrapolating their conclusions or overstating their findings given the nonrandomized nature of the study.

Route of CVS was not specified

Unfortunately, we are not told whether the CVS procedures were performed transcervically, transabdominally, or using both approaches (as is common in many modern programs). Earlier reports involving transcervical sampling found a clear relationship between proximity of the placenta and cervix, as well as uterine position, and the risk of pregnancy loss.[2] That is one reason centers began to choose the sampling route based largely on placental location.[3,4] If the sampling route was individualized in this study, then the observations can be generalized to programs using a similar approach.

Other potential weaknesses (also cited by the authors) include limited demographic data among the entire population for habits or preconditions that might confound pregnancy loss, such as tobacco use and socioeconomic status. The mixture of

experienced clinicians and trainees is another concern, although the authors claim they were equally distributed over the time frame.

More definitive answers are needed

Although this study will be useful in counseling patients who are considering invasive testing, it fails to answer the question of safety definitively. Such an answer requires randomization prior to CVS or the limiting of both procedures to the same gestational age range.

In the most recent head-to-head comparisons at similar gestational ages (11–14 weeks), CVS appears to be safer than amniocentesis.[5,6] The same cannot be said for testing later in the mid-trimester, when amniocentesis is usually performed and has a well-established track record for safety.

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***FAST** TRACK*

The gold standard for acute uterine bleeding has been—and remains—high-dose, intravenous estrogen

Q Which is better at stopping acute uterine bleeding—oral MPA or combination OCs?

A Both regimens appear to be effective and well-tolerated, but neither is as effective as the gold standard of high-dose, intravenous estrogen.

For the purposes of this study, acute uterine bleeding is excessive or prolonged bleeding that necessitates urgent or emergent intervention. As Munro and colleagues point out, it is a "substantial drain on health-care resources" because so many women with this complaint require hospitalization for surgical intervention. Among the options are dilation and curettage, endometrial ablation, uterine artery embolization, and hysterectomy, the definitive "cure."

EXPERT COMMENTARY

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In the United States, acute menorrhagia affects at least 10% of the female population and requires immediate attention. Surgical management is generally reserved for the hemodynamically unstable patient, for those who fail medical management, and for those in whom medical management is contraindicated. The gold standard is high-dose, intravenous estrogen, which halts bleeding in 72% of women within 5 hours.

Although combination oral contraceptives (OCs) are frequently used for acute uterine bleeding, a 2000 Cochrane Review[1] found only 1 randomized controlled trial comparing OCs with other medical therapies—and none with comparison with placebo. The Cochrane Review concluded there is not enough evidence to draw any conclusions about the efficacy of combined OCs for menorrhagia.

Until now, support for the use of combination OCs for this indication has been based primarily on textbooks and expert opinion, and we have very little information on the degree of patient satisfaction with the method.

Progesterone-dominant regimens are not as effective as estrogen

Munro and colleagues aimed to correct the paucity of data by treating women with acute menorrhagia with either combined high-dose OCs or high-dose medroxyprogesterone acetate (MPA). Unfortunately, both therapeutic regimens are progesterone-dominant. Estrogen is the gold standard because it stabilizes the endometrial lining by promoting rapid regrowth. Progesterone impedes the action of estrogen, making it less likely to be effective.

A placebo group was believed to be potentially unethical due to the outpatient nature of the study, but a better comparison could have been achieved with an estrogen-only arm.

Sample size fell far below initial projections

Another difficulty with this study is the level of enrollment (n = 40), which was far below the number needed (n = 400), based on the initial power analysis. Reasons given for the small sample include bias of the referring clinician and patient, and the refusal of many women to submit to randomization. It is difficult to draw significant conclusions based on such a small sample.

What this study reveals

Despite its shortcomings, this study does offer some new information. In the primary

outcome of the study—avoidance of emergent surgery—both therapies appeared to be effective, with only 1 patient requiring an unscheduled surgical procedure during the 4 weeks of follow-up. At 2 weeks of follow-up, bleeding had stopped in 76% and 88% of the MPA- and OC-treated patients, respectively. Side effects were minimal in both groups.

Intravenous estrogen is still the gold standard

Although Munro and colleagues add to our understanding of treatments for acute uterine bleeding, estrogen remains the gold standard. Intravenous estrogen is indicated in the inpatient setting for up to 24 hours, followed by tapering to an oral regimen. High-dose oral estrogen is used in the outpatient setting until a significant reduction or cessation of bleeding occurs.

Progesterone therapy should be started in close sequence with estrogen to minimize the likelihood of heavy withdrawal bleeding. ■

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EXAMINING THE EVIDENCE

NEXT MONTH:

Botox for overactive bladder

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