Mid-Pregnancy Cervix Length May Predict Risk of C-Section

BY MARY ANN MOON
Contributing Writer

In primiparous women, cervical length at 22-24 weeks' gestation predicts the need for emergency cesarean delivery during labor at term, according to a study of data from more than 27,000 women at hospitals in England.

A long cervix (40-67 mm) at mid-pregnancy was associated with a high risk of intrapartum cesarean delivery at term because of failure of labor to progress, and this risk declined with a decreasing length of the cervix.

"We hypothesize that poor progress during labor at term is determined by the development of the uterus at much earlier stages of pregnancy," Dr. Gordon C. S. Smith of Cambridge University (U.K.) and his associates wrote in the New England Journal of Medicine.

Animal studies have suggested that preparation of the uterus for labor begins at relatively early stages of gestation.

To explore this issue in humans, Dr. Smith and his coinvestigators conducted a secondary analysis of data collected in a large multicenter study of pregnancy interventions.

That study, which was conducted at eight hospitals in and around London between 1998 and 2006, had included data from transvaginal ultrasound assessment of cervical length at a median of 23 weeks' gestation in 27,472 primiparous women.

'Rates of cesarean delivery started to rise at a cervical length of 25 mm and plateaued at a cervical length of 50 mm,' [almost doubling the] observed values.

A total of 5,542 of the women went on to require cesarean section, almost always because their labor failed to progress.

The rate of caesarean delivery was lowest (16%) among women with a cervical length in the lowest quartile at mid-pregnancy.

The rate of cesarean delivery rose significantly among women in the second quartile (18%), rose significantly again among women in the third quartile (22%), and rose significantly again among women in the highest quartile (26%) of cervical length.

"Rates of cesarean delivery started to rise at a cervical length of 25 mm and plateaued at a cervical length of 50 mm, approximately doubling across the range of observed values," Dr. Smith and his associates reported (N. Engl. J. Med. 2008;358:1346-53).

"Adjustment for a range of characteristics (maternal age, body mass index, smoking status, race or ethnic group, gestational age at birth, spontaneous or induced labor, birth weight percentile, and hospital of delivery) slightly attenuated but did not eliminate the significant association between cervical length and risk of cesarean delivery at term," the researchers concluded.

Further study is needed to investigate the possibility that a long cervix in mid-pregnancy may signal dysfunctional development of the uterus, "which is ultimately manifested in the need for cesarean delivery at term," Dr. Smith and his associates said. ■

Drugs, Pregnancy, And Lactation

Atypical Antipsychotics in Pregnancy

While data regarding the reproductive safety of certain psychotropics such as selective serotonin reuptake inhibitors and anti-epileptic drugs have increased over the last several years, information regarding attendant risks of fetal exposure to antipsychotics remains more sparse.

This is particularly true for the newer atypical antipsychotics, which are increasingly being used in women of reproductive age for a range of psychiatric disorders in addition to schizophrenia, including bipolar disorder and depression.

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It is therefore critical that clinicians and women have good information upon which to base decisions about continuing treatment during pregnancy. There are several decades' worth of data from large studies supporting the reproductive safety of the typical antipsychotics such as haloperidol or thiothixene, but the reproductive safety data for the atypical antipsychotics are extremely sparse.

To date, few prospective studies on atypicals in pregnant women have been published. In a study comparing pregnancy outcomes in 151 subjects exposed to different atypicals—60 to olanzapine, 49 to risperidone, 36 to quetiapine, and 6 to clozapine—with nonexposed controls, major malformation rates were not significantly different between the two groups (J. Clin. Psychiatry 2005;66:444-9). However, this is a relatively small sample. (The other two atypicals available are aripiprazole and ziprasidone.)

The other available safety data on atypical antipsychotics in pregnant women are derived mainly from case reports or small case series, which have not identified an increased risk for major malformations.

Most of the prospectively identified cases of exposure are to olanzapine (133), risperidone (over 500), and quetiapine (42), with very few to aripiprazole and clozapine, and possibly none to ziprasidone. In March, some of the first registry data on atypicals were reported at a meeting, from the Australian Pregnancy Registry. Among 38 pregnancies exposed to atypical antipsychotics, there were no major malformations.

The association of the atypicals with weight gain, diabetes, and hypertension raises another potential safety issue when these drugs are used during pregnancy. Weight gain and adiposity in pregnant women have also been associated with an increased risk of neural-tube defects, independent of folate status (Am. J. Psychiatry 2002;159:136-7).

As is often the case when considering the use of psychotropics during pregnancy, the specific clinical approach depends on when the patient sees the clinician.

For a patient who presents for evaluation before pregnancy on a low dose of an atypical antipsychotic as an adjunct to a mood stabilizer, it may make sense to switch to an antipsychotic for which more reproductive safety data are available, such as perphenazine. This scenario may not always be feasible, however, because many patients present when they are already pregnant. If they are well maintained, the clinician may be understandably reluctant to make changes.

Because of the absence of indicting data, we have typically maintained patients on atypical antipsychotics if they are already pregnant because of our concerns about clinical destabilization. However, we do recommend close follow-up for safety issues such as weight gain, diabetes, and hypertension during pregnancy, working collaboratively with the obstetrician. Another consideration is that, although there are no robust data clearly distinguishing differences in efficacy, there are patients who appear to derive particular benefit from an atypical antipsychotic.

Based on the limited data available, there does not appear to be a glaring reproductive safety signal for the atypicals. But given the prevalence of use of these medicines in psychiatry, we clearly need more quality data on this drug class, similar to those we have for antidepressants and antiepileptic drugs (AEDs), so that that the atypicals can be safely integrated into the treatment algorithms used during pregnancy to treat women across that spectrum of disease states.

We are establishing an atypical antipsychotic pregnancy registry at Massachusetts General Hospital that will be similar to the North American AED registry. This registry, along with other global AED registries, has produced invaluable data on the reproductive safety of antiepileptics.

We hope that data from registries and studies on atypical antipsychotics will be collected in a timely fashion and will make it possible for women and their physicians to make more informed decisions about use of this class of medicines during pregnancy.

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