Cytokines, Fetal Growth, and RA

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Circulating cytokines appear to influence fetal growth in pregnant women who have rheumatoid arthritis, results of a Dutch study suggest.

High levels of interleukin-10, IL-6, and TNF-alpha might all play a role, each acting independently – and at different stages of pregnancy – to increase the risk of low birth weight among infants born to these mothers, Dr. Radboud Dolhain and colleagues wrote (J. Reprod. Immunol. 2010 [doi: 10.1016/j.jri.2010.08.010]).

Dr. Dolhain did not disclose any pertinent financial relationships.

Dolhain and colleagues wrote (J. Reprod. Immunol. 2010) that needs to be addressed and has been the focus of recently published studies that provide reassuring information for patients. But this theory was not supported by a study we conducted in women aged 18-45 years who were not pregnant and who were randomized to receive either 1.1 mg/day or 5 mg/day of folic acid for 30 weeks. The study determined that the concentrations of unmetabolized folic acid were not significantly different between the two groups, and that levels were low (Am. J. Clin. Nutr. 2009;89:844-52).

Another concern is the potential risk of taking folic acid supplements for an extended period of time among women who have had a previous birth defect or who could become pregnant or are taking a long time to conceive. For those cases in which it is unclear whether a patient is taking more than is needed to reach protective levels, or in which reassurance is needed, I would recommend measuring folate in red blood cells. Levels above 900 nmol are protective against NTDs, so if the patient’s level is 2,000 nmol, for example, a lower folic acid dose can be recommended. The test is not available in every hospital, but it is accessible and can provide reassuring information for patients.

There are not many sure ways to reduce the risk of birth defects, so women should be encouraged to take folic acid supplements and – if they are in the higher risk groups for NTDs – to take the higher doses recommended, without fearing long-term adverse effects.

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