

Medical Update Memo

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Beta interferon therapy use during pregnancy linked to miscarriage and low birth rate

SUMMARY

Researchers at The Hospital for Sick Children (SickKids) in Toronto report that women being treated for multiple sclerosis (MS) with beta interferon therapy have an increased risk of miscarriage or low infant birth weight. The research was reported in the September issue of the journal *Neurology*. The data suggests strongly that women with MS who become pregnant while taking beta interferon should contact their physicians about discontinuing the drug until delivery. In addition, women who are considering becoming pregnant and are using beta interferon therapy should talk to their physicians about how long they should discontinue therapy before becoming pregnant.

DETAILS

Researchers at The Hospital for Sick Children (SickKids) in Toronto have carried out the first prospective disease-matched controlled study on the reproductive effects of beta interferon therapy. Beta interferon therapies (Avonex[®], Betaseron[®] and Rebif[®]) are the most commonly used therapies for treating relapsing-remitting MS. Previous animal studies and human case reports have suggested that beta interferon is not likely to increase the risk of birth defects but there may be a risk of miscarriages. The labelling information for the beta interferon therapies advises women to stop taking the therapy before becoming pregnant or to stop it immediately after becoming pregnant.

Participating in the study were 46 women, who had contacted the Motherisk Program, a research and counselling program at SickKids, from 1997 to 2004. A total of 64 pregnancies were followed among these women. Group 1 was made up of 16 women (23 pregnancies) who were taking beta interferon therapy, mostly for MS. Group 2 consisted of 12 women (21 pregnancies) who had been taking beta interferon, mostly for MS, but had discontinued it at

least one month prior to conception. Group 3 consisted of 18 women (20 pregnancies) who did not have MS and were not taking beta interferon.

The research team found that continued use of beta interferon therapy through pregnancy resulted in a 39 percent increase in miscarriages, a 30 percent increase in non-live births and a lower overall birth weight in live births. The average birth weight of babies born to women exposed to beta interferon was 3,189 grams (just over seven pounds). In Group 2 (women who had stopped beta interferon therapy), the average birth rate was 3,498 (seven pounds, 11 ounces) and in Group 3, (healthy controls) the average birth rate was 3,783 (eight pounds, five ounces).

"Most importantly, we recommend that women with MS who are pregnant or planning on becoming pregnant speak with their neurologists. Discontinuing beta interferon therapy during gestation should not necessarily increase the risk of relapse of MS, as pregnancy tends to reduce such risk," said Dr. Gideon Koren, the study's principal investigator. Dr. Koren is a senior scientist and director of the Motherisk Program at SickKids, as well as a professor of Paediatrics, Pharmacology, Pharmacy and Medicine and Medical Genetics at the University of Toronto.

In addition, women who are considering becoming pregnant and are using beta interferon therapy should talk to their physicians about how long they should discontinue therapy before becoming pregnant. The researchers also recommend that women with MS resume interferon therapy very soon after delivery if they do not intend to breastfeed.

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