



Motherisk Update

Is a fetus a non-consenting patient?

Gideon Koren, MD, FRCPC Peter Selby, MD Bhushan Kapur, PhD

ABSTRACT

QUESTION In the 1960s, Dr Cameron, a Montreal, Que, psychiatrist, experimented with drug-induced sleep and electroconvulsive therapy for psychiatric patients, believing that this method "wipes them clean of harmful memories." In 1992 the government of Canada settled lawsuits by former patients of Dr Cameron, awarding them large payments. The government rejected a similar claim by Lloyd Schrier, whose mother had been treated by Dr Cameron while she was carrying Lloyd, arguing that Lloyd was not Cameron's patient. Or was he?

ANSWER The fetus was exposed to the medications taken by his mother, (eg, barbiturates) and thus qualifies as an unconsenting patient.

RÉSUMÉ

QUESTION Durant les années 1960, D^r Cameron, un psychiatre de Montréal, au Québec, a procédé à des expériences sur le sommeil d'origine médicamenteuse et l'électroconvulsothérapie, croyant que cette méthode éliminait chez les patients tous les souvenirs nocifs. En 1992, le gouvernement du Canada a réglé des poursuites devant les tribunaux déposées par d'anciens patients de D^r Cameron, leur accordant d'importantes indemnisations. Le gouvernement a rejeté une réclamation semblable présentée par Lloyd Schrier, dont la mère avait été traitée par D^r Cameron alors qu'elle était enceinte de Lloyd, sous prétexte que Lloyd n'était pas patient du D^r Cameron. L'était-il ou non?

RÉPONSE Le fœtus a été exposé aux médicaments pris par sa mère (c.-à-d. des barbituriques) et se qualifie donc à titre de patient non consentant.

Treating pregnant women with medications and other therapies must always include consideration of benefits and risks. Some drugs are definitely human teratogens (eg, isotretinoin) and should not be administered when a mother's condition is not serious, urgent, or life-threatening (eg, acne).¹ Human teratogens are sometimes given to treat maternal conditions, however. For example, both valproic acid and carbamazepine cause neural tube defects (in 2% and 1% of fetuses, respectively), yet management of epilepsy during pregnancy is often deemed essential,² and prenatal diagnosis can detect most, if not all, cases of neural tube defects.

There are safe medications for many maternal conditions, but some practitioners hesitate to use them due to misperception of teratogenic risk.

For example, they avoid giving selective serotonin reuptake inhibitors for depression³ and do not treat morning sickness with the safe doxylamine succinate.⁴

Lloyd Schrier's case

Lloyd Schrier's mother was pregnant when she entered Dr Cameron's clinic in February 1960. Over the subsequent 7 months, medical records show that Dr Cameron prescribed for her a combination of barbiturates and other sedatives along with electroconvulsive shock treatments.⁵ Barbiturates were later shown in a randomized placebo-controlled trial to cause cognitive deficits in babies of mothers who took them.⁶ At the time of exposure, however, more than 40 years ago, no evidence suggested fetal

Motherisk Update

risk from such exposure. We cannot judge medical decisions made almost half a century ago by current standards.

Unlike Schrier, the adults who took part in Cameron's experiments had at least a potential benefit from treatment. This unborn baby was exposed to all the risks and none of the benefits of Dr Cameron's "depatterning."

Nicotine replacement therapy case

Several years ago, we conducted a study on the effectiveness of nicotine replacement therapy for smoking cessation during pregnancy.⁷ Women were randomized to receive a nicotine patch or a placebo patch. Midtrial, a patient suffered from what appeared to be withdrawal symptoms after putting on the first patch. She reported unusually violent and rapid movements by her fetus. The research team examined her and detected no other obstetric complications. She decided to resume smoking, and the unusual fetal movements subsided, as did her own symptoms.

The study's safety committee opened the randomization code and confirmed that this mother had received placebo. Discussion within the team led us to conclude that it would be unethical to expose fetuses to nicotine placebo because this case suggested apparent intrauterine nicotine withdrawal, not known previously.

Considering fetal withdrawal, we have consequently put the trial on hold. We are redesigning it as a dose-finding trial without a placebo arm.⁷

Epilepsy during pregnancy

Most women with epilepsy need to be treated during pregnancy. Recent reviews indicate that all major antiepileptic drugs increase teratogenic risk.⁸ Use of more than one antiepileptic further increases the risk.⁹ It makes sense, then, to treat mothers with monotherapy, if possible. Equally important, pregnant women and those planning pregnancy should receive up-to-date counseling so they can make informed decisions. Motherisk staff will be pleased to counsel them.

Fetuses' best interests

Many women take medications during pregnancy. The best interests and welfare of the fetus must be considered in every case of maternal therapy. This should include up-to-date evaluation of studies on fetal safety, maternal benefit and risk, and the risks of untreated maternal conditions.

Many physicians do not have the time, resources, or expertise to find and analyze such data. Motherisk staff will be pleased to offer help, as we do every day to scores of family physicians and other practitioners.



References

1. Koren G, Pastuszak AP, Ito S. Drugs in pregnancy. *N Engl J Med* 1998;338:1128-37.
2. Nulman I, Laslo D, Koren G. Treatment of epilepsy in pregnancy. *Drugs* 1999;57:535-44.
3. Einarson A, Selby P, Koren G. Discontinuing antidepressants and benzodiazepines upon becoming pregnant. Beware of the risks of abrupt discontinuation. *Can Fam Physician* 2001;47:489-90.
4. Bishai R, Mazzotta P, Atanackovic G, Levichek Z, Pole M, Magee LA, et al. Critical appraisal of drug therapy for nausea and vomiting of pregnancy. II: efficacy and safety of Diclectin (doxylamine-B6). *Can J Clin Pharmacol* 2000;7:138-43.
5. Hess H. Money denied to man treated in womb. *Globe and Mail* 1996 December 24;Sect A:1,8.
6. Reinisich JM, Sanders SA, Martensen EL, Rubin DB. In utero exposure to phenobarbital and intelligence deficits in adult men. *JAMA* 1995;274:1518-25.
7. Kapur B, Hackman R, Selby P, Klein J, Koren G. A randomized double blind placebo control trial of nicotine replacement therapy in pregnancy. *Curr Ther Res* 2001;62:274-8.
8. Fried S, Kozer E, Nulman I, Einarson TR, Koren G. Malformation rates in children of women with untreated epilepsy: a meta-analysis. *Drug Saf* 2004;27:197-202.
9. Matalon S, Schechtman S, Goldzweig G, Chnoy A. The teratogenic effect of carbamazepine: a meta-analysis of 1255 cases. *Reprod Toxicol* 2002;16:9-17.

MOTHERISK

Motherisk questions are prepared by the Motherisk Team at the Hospital for Sick Children in Toronto, Ont. Dr Koren is Director and Drs Selby and Kapur are members of the Motherisk Program. Dr Koren is a Senior Scientist at the Canadian Institutes for Health Research and holds the Ivey Chair in Molecular Toxicology at the University of Western Ontario in London.

Do you have questions about the safety of drugs, chemicals, radiation, or infections in women who are pregnant or breastfeeding? We invite you to submit them to the Motherisk Program by fax at (416) 813-7562; they will be addressed in future Motherisk Updates.

Published Motherisk Updates are available on the College of Family Physicians of Canada website (www.cfpc.ca). Some articles are published in *The Motherisk Newsletter* and on the Motherisk website (www.motherisk.org) also.