Caution in the Use of Bromocriptine in Peripartum Cardiomyopathy

It is premature to attribute the recovery of 2 "postpartum cardiomyopathy" patients to the blocking effect of bromocriptine against prolactin and to assign causal relationship of 16 kDa prolactin to human peripartum cardiomyopathy (PPCM) (1,2).

Both patients in heart failure were treated with angiotensin-converting enzyme (ACE) inhibitor and beta-blocker drugs with apparent benefit possibly even before the use of bromocriptine. Most recent studies show that when PPCM is diagnosed in a timely fashion and treatment is instituted with diuretic, ACE-inhibitor, and beta-blocker drugs almost everyone improves, almost everyone survives, and over 50% completely recover left ventricular systolic function (3,4). Furthermore, the rate of recovery in many conventionally treated PPCM patients is often very comparable to that seen in the 2 cases reported, without bromocriptine in the picture.

I urge attention to the issue of the role of prolactin-suppression with bromocriptine in the development of PPCM through carefully controlled, randomly assigned, double-blinded placebo studies, after addressing the following issues:

1) Is it safe to use bromocriptine in the early postpartum period? A number of reports indicate acute myocardial infarction has complicated the use of bromocriptine in healthy mothers for lactate suppression (5). What will be the short-term and long-term effects of circumventing the important natural effects of prolactin on the involution process of the post-gravida uterus?

2) Are the reputedly abnormal 16-kDa and the naturally occurring 23-kDa derivatives of prolactin metabolism harmful? Have sufficient studies been accomplished to be reasonably confident that is the case?

3) Is serum prolactin significantly elevated in PPCM patients either antepartum or post-partum as compared with healthy non-PPCM patients? If so, as might be the case because of efforts to stimulate lactation in an acutely or subacutely ill mother, does that elevation constitute a causal relationship to PPCM rather than a non-causal physiological response?

It is also important to pursue these issues, because if third world mothers with PPCM—where the incidence is higher—were to inhibit lactation through the use of bromocriptine or simply cease breastfeeding in an effort to eventually decrease prolactin, many of their newborns would die of malnutrition as a consequence of the inability to provide a substitute for breast milk (6).

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REFERENCES


Reply

We have not made the claim that our 2 cases would establish bromocriptine as a treatment for peripartum cardiomyopathy (PPCM), and 2 clinical cases never prove a novel concept. We stated this clearly and mentioned that the efficacy of bromocriptine in treating PPCM patients has to be evaluated in a controlled randomized clinical trial (1). Thus, we agree with Dr. Fett’s point that these 2 case reports are no proof for a beneficial effect of bromocriptine in PPCM, even though meanwhile we have made similar beneficial observations in 5 additional patients, applying the same protocol.

Concerning the safety of bromocriptine, there are in fact several case reports on myocardial infarction in early post-partum women in association with taking bromocriptine (2). However, there is a
naturally increased risk for thrombosis and myocardial infarction in post-partum women (3). The risk for spontaneous coronary artery dissection is also increased during pregnancy and in the post-partum period independently from bromocriptine (4). Thus, there are numerous reports on myocardial infarction in early post-partum women independent of bromocriptine (5,6). Left ventricular failure further increases the risk for thrombosis and infarction, and anticoagulation therapy is strongly encouraged for these reasons in PPCM patients. It should be noted that bromocriptine has been used for more than 20 years successfully and safely to stop lactation.

Dr. Fett raises the question of whether it is ethical in third world countries to stop lactation in a woman with severe heart failure, because this would increase the risk for the infant for infection and malnutrition. Nursing is considered as an additional stress factor for the mother’s heart. In addition, standard medication to treat heart failure (angiotensin-converting enzyme-inhibitor, beta-blocker, and diuretic drugs) might be harmful for the infant. Therefore, we would like to ask in return whether it is ethical to expose women with severe heart failure due to PPCM and their infants in a third world country to a higher risk for death or disability because of nursing?

We should all aim to work together to find solutions and hopefully efficient ways to treat this deadly disease and help affected patients. Our goal is to establish as soon as possible whether bromocriptine is efficient and safe to treat PPCM. Professor Sliwa in South Africa has already started a controlled randomized trial, and we are planning a trial in Europe and the U.S. Dr. Fett would be in an ideal position in Haiti, with its high incidence of PPCM, to take action!

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