MOTHERISK *UPDATE*

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Anorexia nervosa during pregnancy

ABSTRACT

QUESTION A 22-year-old patient in my clinic was diagnosed with anorexia nervosa (AN) 7 years ago. She is now married and planning her first pregnancy. She is still underweight. What should she expect during pregnancy, and are there any implications for her unborn baby?

ANSWER Women with AN are at higher risk of complications during pregnancy, mainly because of low body weight. Apgar scores and birth weights of infants born to mothers with AN have been found to be significantly lower than those of infants born to healthy women. Rates of cesarean delivery, postnatal complications, and postpartum depression are higher among mothers with AN. Complications include hypothermia, hypoglycemia, infections, and increased rates of perinatal death. It is important to ensure appropriate intake of not only calories and proteins but also micronutrients, such as folic acid, to prevent neural tube defects.

RÉSUMÉ

QUESTION Une patiente de 22 ans qui fréquente ma clinique a reçu il y a 7 ans un diagnostic d'anorexie mentale. Elle est maintenant mariée et planifie sa première grossesse. Son poids est encore sous la normale. À quoi devrait-elle s'attendre durant la grossesse et y a-t-il des répercussions sur l'enfant?

RÉPONSE Les femmes souffrant d'anorexie mentale sont à risque plus élevé de complications durant la grossesse, principalement en raison de leur faible poids corporel. Il a été observé que les scores Agpar et le poids à la naissance des nourrissons nés de mères souffrant d'anorexie mentale étaient considérablement moins élevés que ceux des enfants nés de femmes en santé. Les taux de césariennes, de complications postnatales et de dépressions post-partum sont plus élevés chez les femmes souffrant d'anorexie mentale. Au nombre des complications figurent l'hypothermie, l'hypoglycémie, les infections et des taux plus importants de mort périnatale. Il importe d'assurer une consommation appropriée non seulement de calories et de protéines mais aussi d'oligo-éléments comme l'acide folique pour prévenir les malformations du tube neural.

Anorexia nervosa (AN) is characterized by prominent behavioural, psychological, and physiologic disturbances, including refusal to maintain a minimally healthy body weight (85% of expected weight), dramatic weight loss, fear of gaining weight even though underweight, preoccupation with food, and abnormal food-consumption patterns.[1] Although not the result of a single biologic factor or psychologic aberration, AN is associated with lower heart rates, blood pressure levels, and metabolic rates, higher levels of hydrocortisone, and greatly decreased production of estrogens.[2]

Ovulatory dysfunction is very common in AN because of hypothalamic-pituitary dysfunction, and serum gonadotropin levels are frequently undetectable.[3] Nevertheless, pregnancy is possible, and case reports and case series have described the pregnancies of women with AN.

The fertility rate among women with AN is unknown, but is assumed to be lower than in the general population owing to lower body weight, absence of regular menses, and reduced sexual activity among women with active or postactive AN.[4] Yet a study showed that all women with AN who intended to conceive were successful in doing so within a year,[5] and one report described a lessening of AN symptoms during pregnancy.[6]

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.

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A recent prospective study of almost 50 pregnant women with eating disorders[7] found most of them had normal pregnancies and healthy babies. Another study reported that underweight women had higher rates of high-risk pregnancies[8] (those with hyperemesis gravidarum responded less favourably to treatment and spent twice as many days in hospital during pregnancy[9]), anemia, endometritis, respiratory and cardiovascular illnesses, miscarriages (38% compared with 16% in controls) abortions (27% compared with 13% in controls),[11] and early rupture of membranes[10] than women of normal weight.[10] One study found that the rate of pregnancies free of maternal complications was 51% in a group of women with AN, significantly lower than in the control group (75%).[11]

The Apgar scores of the newborns of women with AN are generally lower than those of newborns in the general population[8] and than those of newborns born to women in remission from AN.[12] The mean birth weight of these newborns was found to be significantly lower than that of infants of healthy mothers[13] or of mothers in remission,[12] and the risk of birth weight <2500 g was twice as great for women with AN.[4] This might be explained by the fact that women with AN had double the rate of premature births.[4]

While a lower body mass index (<19) during conception is a risk factor for small-for-gestational-age infants,[10] the risk is even higher if a mother conceived through in-vitro fertilization.[14] Length at birth was also reported to be lower among children of mothers with eating disorders, although the study's sample size was too small to allow the authors to draw definite conclusions.[13]

Rates of cesarean section among women with eating disorders, especially AN, were higher than those among healthy women. A retrospective study of 66 anorexic women and 98 controls[11] and a prospective study of 49 live births to women with eating disorders[7] reported that 16% to 26% of pregnancies of anorexic women ended up in cesarean section, compared with only 3% in one of the studies[11] and a reported rate of 15% in the general population. The reason for this is not clear. One explanation could be obstetricians' awareness of the possible complications and low Apgar scores that might lead them to "control" the delivery.

After delivery, neonates of mothers with AN are at higher risk of hypothermia, hypoglycemia, infections, and perinatal death (up to six times the expected rate)[4] than neonates of healthy mothers. One retrospective review of the literature reported evidence of long-term reduced intellectual ability among these children.[10]

Higher rates of postpartum depression[9] are also of concern in managing anorexic women. A prospective study[7] showed that a third of women with eating disorders had postpartum depression while <10% of healthy women did.[15] The profound physical, emotional, and cognitive changes due to background AN and weight gain during pregnancy, and the fact many women with AN have a history of affective disorders, could explain this finding.[16]

Family physicians and obstetricians should be aware of the complications that could arise during the pregnancies of women with eating disorders, especially AN. Women are sometimes reluctant to disclose their condition or symptoms associated with a primary eating disorder.[16] History of eating disorder, hyperemesis gravidarum, and insufficient weight gain during pregnancy are the most important symptoms to look for in following a pregnancy and could be the primary signs of a pregnancy complicated by AN.[16] It is important to ensure appropriate intake not only of calories and proteins but also of micronutrients, such as folic acid.

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