

## EDITORIAL

### Eating disorders in pregnancy<sup>1</sup>

During pregnancy, most women will experience a short-lived and benign disturbance in their normal eating patterns. The majority report the onset of cravings or aversions to certain food-stuffs while a small number indulge in pica, the consumption of non-nutritious substances such as soap or clay (Dickens & Trethowan, 1971). These disturbances usually remit after delivery and rarely give rise to physical complications for mother or foetus. However, more serious and chronic eating disorders including bulimia nervosa and anorexia nervosa may also occur during pregnancy. These conditions are most prevalent among women of childbearing age and some evidence suggests that both disorders can also be precipitated by pregnancy (Weinfeld *et al.* 1977; Price *et al.* 1986).

The prevalence of eating disorders among pregnant women is unknown, but the low body weight and sexual inactivity of anorexic women suggests that this disorder is much less common than in the general population. Markedly reduced fertility rates have been confirmed in long-term outcome studies of these patients (Brinch *et al.* 1988). Comparable data are not available for bulimia, but most of these patients are of normal weight and they are more likely to be married than anorexics. Although the prevalence rate for bulimia in women is approximately 1% (King, 1986; Johnson-Sabine *et al.* 1988), and partial syndromes are also common, no cases were reported in a random series of 119 primigravidae (Kumar & Robson, 1984) or in 92 obstetric patients referred for assessment by a liaison psychiatrist (Appleby *et al.* 1989). Such low rates of diagnosis may be due to the reluctance of patients to disclose details of their behaviour in the absence of specific questions about dietary habits and attitudes to weight gain (Lemberg & Philips, 1989). These enquiries are necessary to distinguish bulimia nervosa and anorexia nervosa from the minor eating disturbances of pregnancy and hyperemesis gravidarum. Accurate diagnosis is important in view of the concerns, reviewed below, which have emerged about the effects of strict dieting and repeated bingeing or self-induced vomiting on the health of mother and foetus.

#### WEIGHT GAIN IN PREGNANCY AND EXACERBATION OF EATING DISORDERS

A normal healthy woman gains approximately 12.5 kg during pregnancy (Hyttén, 1980). Many women express negative feelings about this weight increase and the coincident change in body shape. In an American study (Palmer *et al.* 1985), a negative score on attitude to weight gain was significantly related to lower actual weight gain. Forty per cent of primigravidae studied by Fairburn & Welch (1990) expressed anxiety that they might gain too much weight, 28% had negative attitudes to changes in shape and 72% reported a fear that they would be unable to return to their former weight after delivery. Those with a previous history of dieting behaviour held stronger fears about gaining too much weight. Many patients reported episodes of overeating but only one (who had a previous history of bulimia) had associated feelings of loss of control. Lemberg & Philips (1989) also reported that a fear of losing control of weight during pregnancy is commoner in patients with eating disorders.

One of the factors which may amplify negative attitudes to weight gain is the pregnant woman's exaggerated sensitivity to changes in her body shape. During the early stages of pregnancy most women overestimate face, chest, waist and hip size, but by 8 months the difference between real and perceived size decreases, indicating a positive adaptation to change (Slade, 1977). A similar but non-

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adaptive disturbance of body image perception is found in anorexia nervosa and bulimia nervosa, where it may play an important role in motivating dieting and purging behaviour.

In addition to the obvious physical changes, pregnancy inevitably brings changes in relationships, self-image, autonomy and sexuality which can intensify disordered eating. Such negative effects may be counterbalanced by the mother's concern for the health of the foetus, which leads many pregnant women to abstain from alcohol and smoking and could also lead to suppression of dieting or bingeing. Retrospective assessment of selected patients confirms that, in a majority of cases, bingeing and purging behaviours improve temporarily during the later stages of pregnancy, only to relapse after delivery. In a study of 20 untreated normal weight bulimic women, Lacey & Smith (1987) found that bulimic behaviour decreased during pregnancy, so that by the third trimester 75% had stopped bingeing and vomiting. Symptoms frequently returned after delivery, and in almost half, eating was more disturbed. In another sample of 43 women reporting abnormal eating patterns during the six months before conception, symptomatic improvement occurred during pregnancy in 70%, but 44% retained some symptoms until delivery (Lemberg & Philips, 1989).

Information on the effect of pregnancy on the anorexic woman is lacking owing to the problem of recruiting sufficient numbers of cases. The results of studies on small numbers of subjects are contradictory, but the best of these (Stewart *et al.* 1987) found that a majority of anorexics experienced a worsening of symptoms while 12 of 13 recovered cases remained well. In a smaller uncontrolled study, 6 anorexics were found to improve their calorie intake during pregnancy (Namir *et al.* 1986).

## OBSTETRIC COMPLICATIONS

Weight gain of 16–25% of pre-pregnant weight is associated with fewer complications of pregnancy, labour and delivery (Shepard *et al.* 1986), whereas low pre-pregnancy weight and low weight gain is strongly associated with low infant birth weight (Abrams & Laros 1986; van der Spuy *et al.* 1988). Women who are underweight at conception (body mass index < 19) have a significantly increased risk of delivering infants weighing below the tenth centile (19% *v.* 8% for normal weight mothers) (van der Spuy, 1985). The risk increases to 54% for underweight women who had artificially induced ovulation.

Many eating disorder patients are underweight at conception, and research confirms that these women give birth to low-weight infants. Women with eating disorders in remission gain significantly more weight than those with active anorexia or bulimia. In one study (Stewart *et al.* 1987), the average weight of infants of anorexic mothers was 2744 g, in comparison with 2363 g for bulimics and 3592 g for women who had recovered from eating disorders. Infants of mothers with eating disorders were also more likely to be delivered prematurely (average; 37 weeks bulimia, 38 weeks anorexia and 39 weeks controls) and had lower 5 minute Apgar scores. In a large Danish series, 14% of infants of anorexic mothers were born below 2500 g, twice the expected rate (Brinch *et al.* 1988). Further strong evidence of foetal growth impairment in anorexia nervosa comes from a study by Treasure & Russell (1988), who assessed seven anorexic women who conceived despite low body weight. Serial ultrasonography showed diminished growth only during the last trimester. The abdominal circumference of all seven infants was below the third centile at birth. Average maternal weight gain during pregnancy was only 8 kg.

Women with eating disorders appear to be prone to a variety of other obstetric complications which are not simply due to low weight. Many patients are viewed as high-risk cases by their obstetricians (Lemberg & Philips, 1989), and outcome studies confirm increased rates of difficult labours often ending in medical intervention (Stewart *et al.* 1987; Fahy & Treasure, 1989). In their retrospective review of 20 bulimics, Lacey & Smith (1987) reported nine cases of hypertension during pregnancy and two sets of twins. Eight deliveries were breech, four were by forceps, and three were Caesarian sections. Recurrent miscarriage between 3 and 5 months has been reported in a woman with severe bulimia, who had two full-term deliveries during periods of remission (Ford & Dolan, 1989). Evidence is also accumulating of increased perinatal mortality in the infants of

these patients. Brinch *et al.* (1988) traced 50 anorexic mothers who had given birth to 86 children. Seven babies had died within 1 week of delivery, five from complications of prematurity, one from hydrocephalus and one was stillborn. The perinatal mortality in this study was six times the national rate at that time. In a Canadian series of 10 pregnant anorexic women, 2 pregnancies did not go to term (1 spontaneous abortion at 12 weeks and 1 intrauterine death at 15 weeks) in comparison with 1 elective section for 13 cases in remission (Stewart *et al.* 1987).

Recent research also raises the worrying possibility that maternal bulimia or strict dieting may constitute a teratogenic risk to the foetus. Maternal undernutrition is known to be associated with increased perinatal mortality and an increased risk of congenital malformations (van der Spuy, 1985), but weight loss in association with vomiting may constitute an added risk. Women with hyperemesis gravidarum who lose more than 5% of their pre-pregnancy weight give birth to smaller infants who also have an excess of integumentary abnormalities (e.g. webbed toes, skin tags, extra fingers) (Gross *et al.* 1989). Lacey & Smith found an excess of similar abnormalities in 22 infants born to bulimic mothers (Lacey & Smith, 1987). It has previously been argued that vomiting alone during pregnancy may have teratogenic effects, but a rigorous study by Klebanoff & Mills has shown that increased risk is probably accounted for by greater resource to antiemetic drugs in patients with hyperemesis (1986). In bulimia and anorexia, account would also need to be taken of abuse of appetite suppressants and laxatives. The problem of teratogenicity needs to be addressed by studies which take these possible influences into account as well as controlling for the effects of selection bias which causes difficulties in interpreting the results of most reported studies.

## PARENTING IN WOMEN WITH EATING DISORDERS

In her role as a mother, the anorexic woman's fear of food and intense preoccupation with body shape will conflict with her responsibility to feed and nurture her child. For the bulimic, similar problems combine with the elaborate and often rigid procedure of planning and executing binges, and children may suffer serious neglect during these episodes (Fahy & Treasure, 1989). Woodside & Shekter-Wolfson (1990) have observed that parenting difficulties may be accompanied and complicated by serious marital problems which may need to be addressed during the course of treatment.

The cause for greatest concern comes from reports which suggest that some mothers encounter special problems feeding their children properly. In a Danish follow-up study of 50 anorexic mothers, failure to thrive during the first year was reported by mothers in 17% of children (Brinch *et al.* 1988). In a Dutch series, seven children of anorexic mothers presented with stunting of growth and low weight for height. Evidence was gathered by the investigators to demonstrate that children were undernourished and had suffered psychosocial deprivation (van Wezel-Meijler & Wit, 1989). Stein & Fairburn (1989) raise similar concerns about the children of bulimic women. Their report describes 5 mothers who were not providing adequate nutrition for their young children and who also expressed undue concern about the children's weight and shape. One child was severely underweight and another was obese.

## CONCLUSIONS

Anorexia nervosa and bulimia nervosa are rarely diagnosed during pregnancy, but many cases come to light later, usually after seeking treatment for their eating disorders at specialist clinics. This method of case identification means that most of the work reviewed above is based on a highly selected sample of patients, possibly exaggerating the negative effects of the eating disorders on pregnancy.

The evidence which is available suggests that serious eating disorders are rarely precipitated during pregnancy, bulimic symptoms frequently improve temporarily, but the course of anorexia is less vulnerable to change. The data suggesting an association between eating disorders and a variety

of complications of pregnancy, delivery and raised perinatal morbidity are more persuasive than those linking maternal bulimia with foetal abnormalities. However, the teratogenic effect is worthy of further investigation in view of the high prevalence of bulimia in the community. There is a clear need for accurate prevalence rates of eating disorders in pregnancy to be derived in order that this issue can be addressed and so that obstetricians can be advised of the clinical risks and the possible benefits of psychiatric intervention in ante-natal cases.

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