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Bulimia Nervosa
The Impact of Pregnancy on Mother and Baby

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This study examines the impact of pregnancy on the reported eating behaviour of 20 untreated normal body weight bulimia nervosa women; it also reports foetal and obstetric abnormalities and indicates the initial eating habits of the infants. The prevalence of binge-eating and self-induced vomiting reduced sequentially during each trimester of pregnancy. By the third trimester 15 women (75%) had stopped all bulimic behaviour and in the remainder the disturbed eating was less severe. Symptoms tended to return in the puerperium and in nearly half the sample abnormal eating was more disturbed after delivery than before conception. However, the improvement associated with the pregnancy described by seven patients was maintained and for five it appears to have been curative. The common fear among pregnant bulimics that their abnormal eating behaviour may damage their unborn child cannot be dispelled by this study; the incidence of foetal abnormality (including cleft palate and cleft lip), multiple pregnancies and obstetric complications (including breech presentation and surgical intervention) was high. The nutrition and development of the infants was good although three mothers (15%) reported slimming their babies down within the first year.

Early morning sickness, nausea and faddism are often reported concomitants of pregnancy. However, the incidence of these behaviours in pregnant women with bulimia is unknown. Certain aspects of bulimia, particularly the self-induced vomiting (Russell, 1979), the major fluctuations of calorific intake (Lacey & Gibson, 1985), the concern about shape and weight (Birtchnell *et al*, 1985) and the often associated fluctuating dysphoria, lead to the premise that the normal body weight bulimic could be liable to major difficulties during pregnancy and lactation. Further, because of the high co-prevalence of eating disorders in the families of bulimics (Hudson *et al*, 1983) the impact of the patient's eating disorder on her child's initial feeding warrants examination.

The aim of this study is to examine the impact of pregnancy on the dietary difficulties of the normal body weight bulimic woman and to report the eating habits of her child during the first year of life. The relevance of such a study is heightened by two further points. First, the finding of the first author (Lacey *et al*, 1986*a*) that 9% of the patients presented at his clinic do so, inter alia, because they desire to have a child but believe that binge-eating, if left untreated, could damage the unborn infant. Second, and perhaps consequentially, there appears to be a tendency for such women to become pregnant at the end of treatment (Lacey, 1983; Lacey & Gibson, 1985).

Method

All patients were attending the first author's Eating Disorders Clinic. The sample consisted of 20 consecutive bulimic women, of normal body weight, who reported having given birth within 2 years of the initial assessment but prior to receiving any treatment. All patients fulfilled the criteria for bulimia as laid down by the St George's Clinic (Lacey *et al*, 1986*a*, 1986*b*) and DSM-III (American Psychiatric Association, 1980).

A full psychiatric, obstetric and gynaecological history was taken. The patient then completed a questionnaire and any uncertainties were checked on face-to-face interviews. The questionnaire consisted of five sections, each of which in sequential order, dealt with a stage of pregnancy or the puerperium. The first stage – which we called 'pre-conception' – referred to the 3 months prior to known conception; the second, third and fourth sections dealt with the three trimesters of pregnancy, and the fifth section dealt with lactation, weaning and the infant's subsequent eating habits. As far as possible questions were asked such that the replies were either numerical or 'yes/no'. Space was provided after each question for the patient to amplify her answer. If the patient had had more than one child, she was asked to base her answers on her last pregnancy.

Results

Age of delivery ranged from 23–34 years, with an average of 28 years. Sixteen patients were primagravida; of the remainder, only one had more than one previous child. Seventeen patients were married, one was separated (her husband being the father of the child) and two were

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unmarried. Including the separated woman, three were living apart from the father of their child. The median social class was Social Class III.

Clinical state

All patients described current episodes of distressful binge-eating (mean = 2.5/day s.d. = 1.1). All had a well-established binge-eating pattern (duration from 3–22 years).

The patients reported the following behaviours currently associated with their binge-eating. All 20 engaged in self-induced vomiting and four also abused laxatives. All were attempting to lose small amounts of weight, on average, desired weight being half a stone (3.2 kg) less than presenting weight. Eleven patients had experienced fluctuations in body weight which distressed them. No patient felt an irrational fear (phobia) of normal body weight; their mean body weight was 106% of their matched population mean weight (MPMW), the range being 94–115% MPMW. All realised that their eating pattern was out of control and 16 had at some point felt a lack of control which had extended beyond food abuse into other areas of their life, such as interpersonal relationships. All felt self-depreciatory thoughts and 17 had felt depression in association with eating binges.

Fourteen patients had Type I bulimia (Lacey, 1984*a*) i.e. they did not describe a history of previous anorexia nervosa, weight phobia or massive weight loss. Five patients described Type II bulimia, i.e. they had a previous history of anorexia nervosa but had 'recovered' to normal body weight and no longer had a weight problem. One patient had Type III bulimia, i.e. she gave a history of massive obesity being some 50% above MPMW. Her weight had been within a normal range prior to conception and during the 18 months since delivery. The number of Type II bulimics in the sample (25%) was somewhat less than the number (34%) who regularly present at our clinic.

The eating disorder and pregnancy

The number of women who were binge-eating and vomiting reduced sequentially during each trimester of pregnancy but increased again in the puerperium (Table I). It can be seen that only five patients were binge-eating during the final trimester and in four of these the frequency of bingeing was less than in the first 3 months of pregnancy. In fact, 19 of the 20 subjects reduced the frequency of binge-eating over the course of their pregnancy, the exception increased the frequency of her binge-eating, but decreased the frequency of self-induced vomiting and stopped abusing laxatives.

TABLE I
Number of patients binge-eating in each 3-month period

Before conception	20
First trimester	16
Second trimester	14
Third trimester	5
Puerperium	12

All 20 patients reported that they were determined to improve their eating during pregnancy. Three patterns of response were found. Nine patients showed a reduction in the frequency of binge-eating during pregnancy with an increase afterwards to a level in excess of that occurring in the pre-conception period (Fig. 1). Four more patients showed a similar pattern but the frequency during lactation and weaning was not in excess of the frequency before conception. Most interestingly, however, seven of the patients who had stopped binge-eating during pregnancy maintained this improvement not only during lactation but also during weaning, and, in the case of five of them, this improvement had continued for over a year after confinement. These five patients were either pregnant when first assessed or became pregnant shortly afterwards: none have needed formal treatment.

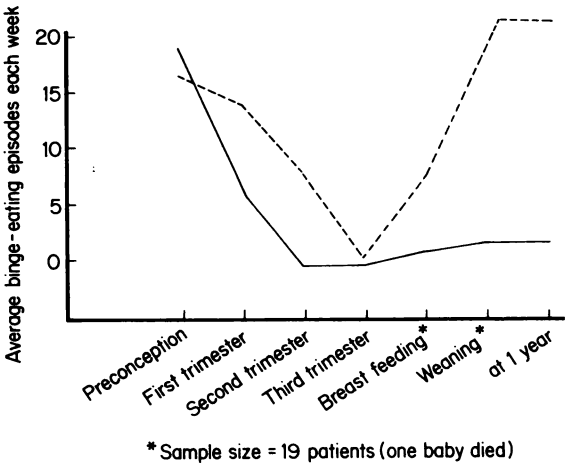


FIG. 1 The changing pattern of binge-eating in seven women (–) who maintained their improvement and 13 who returned to bulimia (---).

The pattern and frequency of self-induced vomiting is similar to the binge-eating data above with the exception of the one patient already described. Four patients abused laxatives. All stopped using them as soon as they discovered they were pregnant but all had returned to laxative abuse either during weaning or bottle feeding. In two cases the amount of laxative abuse was higher during the puerperium than prior to conception. Alcohol abuse was described by three patients. Only one continued to drink during the first trimester of pregnancy and she returned to alcohol abuse after delivery.

Prior to conception the four most preferred binge foods were in order: starchy foods, sugars, 'junk' food and cheese. Little change occurred during pregnancy apart from cheese being more abused among those women who bottle-fed.

Other findings

Prior to conception nine of the patients described an irregular menstrual cycle, although none were amenorrhoeic.

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Five described difficulties in conceiving. Fifteen patients had planned their pregnancies.

During the pregnancy all patients reported being 'worried' about what they were eating, ten because they thought their binge-eating might affect their baby and six because of weight gain. Seven patients reported being 'faddy'. Thirteen patients became constipated and all of these took fruit, bran or other fibre rather than proprietary laxatives. All patients took iron or vitamin supplements and one patient took an unprescribed dietary supplement (Complan). Seventeen patients (85%) reported 'morning sickness' but all were able to distinguish it from self-induced vomiting.

Five patients (25%) found the change in body shape disturbing ("I felt my shape would be permanently changed"; "I felt ugly and huge"; "I felt sexually unattractive"), while six patients (30%) liked the change ("I felt proud and pleased").

After having their baby, 17 patients (85%) felt that having a child had altered the need to have a binge. However, only six of these felt that the pregnancy had been a positive help ("My need to be a good mother helped me to stop it"; "I have a horror of my baby witnessing my bingeing"). Eleven believed that the stresses of pregnancy and looking after a child had caused a deterioration ("It is more of a problem now because I cannot throw away the baby's food"; "It has created more problems in our marriage"; "I binge at night when I am feeding the baby"; "I feel so tired and I eat when I cry"). Eleven (55%) of the patients believed that the presence of their babies inhibited the binge-eating, either because they felt that the child was noticing or they were frightened that the child would copy them, or simply that looking after a baby left insufficient time to binge-eat. Six patients reported having their children in the same room as themselves when binge-eating and seven (35%) reported ignoring their child because they were pre-occupied with vomiting. Only six had felt that they had regained their figure after the delivery, but half the sample had felt they had lost the extra weight gained, six by pathological means.

The eating habits of the child

All babies were breast-fed either wholly or in combination with bottle-feeding. All the patients felt that the damage to the figure caused by breastfeeding was more than compensated for by "giving him the best", "not having to concern myself about sterilisation or food preparation" and "in any case I enjoyed it!" However, the majority (70%) of the women had problems with breastfeeding and reported sore nipples, not enough milk, engorgement, inverted nipples, or slow feeding. This resulted in 13 patients using partial bottle feeding – although all regretted the necessity. Weaning took place between 3 and 6 months and the first solid food given to the child showed, in our view, excellent judgement. All the women had informed themselves about childhood nutrition either from their Health Visitor or, more usually, from a popular but responsible women's magazine. All the children – save one (see later) – have grown satisfactorily.

Seven mothers reported concern that their children might be overweight. Three (15%) had slimmed their babies down. Their GPs clinical records showed the babies to have been plump, but well within a normal range of weight. Discussion with the GPs concluded that the mother's behaviour was not justified and in our judgement was related to their psychopathology. In fact, 12 patients reported being concerned that their children would become overweight "like me". Seven babies had had a period of vomiting but in only one case was this behaviourally induced "It happens when I play too much with him". Sixteen children had periods of constipation but none were given laxatives. No mother gave an emetic. Half the babies had periods of diarrhoea due to infection. Four mothers reported trying to avoid giving their children carbohydrate foods and five had prevented him/her having sweets. Three mothers thought their babies were 'faddy' eaters and seven reported uncooperative behaviour at mealtimes. Half the sample had given their children vitamin drops and two mothers had established their babies on a vegetarian diet.

Five mothers (25%) had used food to punish their children, usually by the withdrawal of sweets, and nine had reported giving food for comfort: "it cheers him up". Ten mothers believe that they had used food as a means of expressing the love they felt for their babies.

Abnormalities in pregnancy and delivery

Of 22 babies born, 13 were girls and nine boys. One was born prematurely and died shortly after birth at 29 weeks. The child weighed 950 g and was normal; his mother had a long history of alcohol and soft drug abuse and fulfilled our criteria for multi-impulsive bulimia (Lacey *et al*, 1986*a*). All other children were born at full term and weighed between 2500 and 3700 g (mean = 3200 g). There were two sets of twins. One baby had a cleft palate and one a cleft lip; neither mother was taking benzodiazepines. A number of women reported abnormalities in their pregnancy or in delivery. Nine reported hypertension, including two with pre-exclampsia. Eight deliveries were breech. Four were delivered by forceps and three by Caesarian section. These findings were confirmed by the patient's GP or Obstetrician.

Discussion

The chaotic eating pattern of the bulimic is not made worse by pregnancy. In fact, the reverse is true: pregnancy is associated with an improvement in the condition. Of the 20 patients in our study, 19 reduced the frequency of their binge-eating and all of them reduced the frequency of self-induced vomiting. Further, the rate of binge-eating fell with each trimester as did alcohol abuse in those patients who reported it. Although in most cases, symptoms returned after delivery, (and in some the symptoms were worse than prior to conception), in a quarter of the sample pregnancy appears to have been curative.

It is not possible on the basis of this study alone to determine the reasons for this pattern of response. However, the clinical evidence is strongly suggestive

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that there was a positive and strong attempt on the part of these mothers to control their eating disorder because they feared harming their babies. Normal body weight bulimics report a sense of being out of control which we believe to be essential for diagnosis (Lacey *et al*, 1986*a*). These findings suggest that this feeling can be overcome by the motivated patient and that pregnancy provides such motivation. Interestingly, it has been noted (Gayford, 1984) that pregnant alcoholic women similarly control their abuse – and probably for the same reason.

Certain other factors – physical, metabolic, perceptual and psychological – also appear to be involved. Physical restraint certainly operates in some patients. As the fundus of the enlarging uterus pushes out of the pelvis, the stomach is restricted and the volume of food it could contain thereby limited. The vast food intake reported by some of our patients (detailed calorific intakes are published in Lacey & Gibson, 1985) would not be possible. Thus the classical cycle of bulimia – binge-eating, vomiting and then bingeing again – is broken and the patient has the opportunity to re-learn a normal eating pattern. Although pregnancy is a time of increased and increasing energy demand this cannot explain our findings. If this were the case the effect would persist during lactation: a time when calorific requirements are higher still. Certainly, some patients maintain their improvement during breast feeding, but the majority show a deterioration.

A change in weight and shape is a normal part of pregnancy, and sensitivity about both are prevalent in bulimia. It is thus noteworthy that not only did the patients in our sample accept that body shape must change, doing nothing to minimise the effects of the pregnancy, but 75% did not even find the change disturbing. Bulimia is associated with a disturbance of body perception. This over-perception becomes significantly less following short-term behavioural and psychodynamic treatment (Birtchnell *et al*, 1985). It could be that pregnancy provides, at least for some bulimics, a similar forum for change. It is an acceptable, if not venerated 'largeness' which provides a break from the pressure of conforming to a cultural ideal of thinness.

It is not possible in any academic sense to differentiate those patients who return to binge-eating after pregnancy from those who maintain their improvement. It is noteworthy that the latter stopped their binge-eating completely when they discovered they were pregnant and that they tended to have stable and meaningful relationships. On the other hand, those who returned to bulimia tended to be women with inter-personal problems and a sense of failure as women – and they used pregnancy as an attempt to combat this, by achieving in an obvious feminine role – that of procreation. We would not be so crass as to suggest that pregnancy is an answer to bulimia. It does, however, provide a period of dietary stability, similar to that attempted in certain treatment programmes (Garner & Garfinkel, 1984). Both pregnancy and treatment reduce the drive to 'diet', both provide external restraint to prevent gross binge-eating, both encourage the acceptance of body shape and weight, both provide motivation to change and both are time-limited and provide an opportunity for self-reflection (Lacey, 1983).

Our findings have implications for treatment: counselling should be given on first interview particularly as a large number of the women (9%) intend shortly to have a child and a number become pregnant before formal treatment can begin. Our own treatment programme (Lacey, 1983, 1984*b*) is composed of short-term weekly sessions of focused behavioural and brief psychodynamic therapy, followed by 3-monthly appointments which continue the counselling and insight-directed therapy and which form an integral part of the treatment (Lacey *et al*, 1986*a*). We believe that treatment for the pregnant woman should be concentrated during the weeks of the third trimester when the eating behaviour is quiescent and deeper issues not thereby obscured. The 3-monthly follow-up sessions take place during the puerperium fitting well with the schedule of the busy young mother.

We do not wish to imply that binge-eating in the first trimester is implicated in foetal abnormality. The sample is too small and other factors – heredity, drugs and alcohol – cannot be discounted. However, the common fear among these patients that their abnormal eating behaviour could damage their unborn child cannot be dispelled by this study. The incidence of foetal abnormality, multiple pregnancies and obstetric complications was high. National figures (OPCS Monitor, 1983) sampled the same year as this project and in a similarly aged maternal population suggests a prevalence for multiple births of 0.82% of pregnancies. The prevalencies of cleft lip and cleft palate were respectively 9.9 and 4.3 per 10 000 total births. In a further case a patient gave birth to a boy with pyloric stenosis, which we have reported elsewhere (Lacey, 1983). This patient was outside this study because she became pregnant *after* treatment. Although the frequency of binge-eating was reduced, it nonetheless continued throughout the first trimester. These findings, even if considered within the context of all pregnant women seen in our clinic, are disturbing and warrant further investigation probably in collaboration with other research centres.

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