Abstract  Background There is insufficient information on the predictors of parenting difficulties in mothers with severe mental illness. Using data from mother and baby units in the UK we aimed to examine the social and clinical characteristics of mothers whose babies were supervised by social services on discharge.  Method A case-control study was carried out using data from mother and baby units and facilities entered onto the Marce database.  Results Of 1197 mothers, 23% were discharged with their babies under some form of social services supervision. Factors independently associated with an increased risk of supervision included social class (OR 3.16, 95% CI 1.99–5.03), single marital status (OR 2.10, 95% CI 1.38–3.20), behavioural disturbance (OR 1.69, 95% CI 1.08–2.65) and psychiatric illness in the partner (OR 2.67, 95% CI 1.59–4.49). The diagnostic groups independently associated with the highest risk of having a supervised baby were schizophrenia (OR 5.16, 95% CI 2.61–10.21) and personality disorder (OR 9.29, 95% CI 3.46–24.91).  Conclusions Mothers with schizophrenia are at particularly high risk of having their baby supervised by social services. Preventative interventions should be targeted at socio-economic difficulties, early detection of psychiatric disorders postpartum and treatment of perinatal mental illness in the context of the whole family.

Key words  parenting – mother and baby unit – schizophrenia – social support – postpartum

Introduction

There are a growing number of studies that report that the majority of women with severe mental illness are mothers (McGrath et al. 1999; Howard et al. 2001) and that a significant proportion remain involved in the care of their children (Gopfert et al. 1996; White et al. 1995). Little is known about how to assess the safety of parenting in the context of chronic maternal psychiatric disorder (Appleby and Dickens 1993), but mothers with severe psychiatric disorders are often considered to be unable to care for their children. In one study, 50% of women with schizophrenia and 10% of women with bipolar disorder in a mother and baby unit in South London were discharged without their child (Kumar et al. 1995).

Social support to mentally ill parents has been shown to protect children from subsequent childhood psychiatric morbidity (Rutter and Quinton 1984), but others have suggested that the most important single predictor of outcome is diagnosis (Hipwell and Kumar 1996). There is a disproportionate representation of black children in the care system (Barn 1993) and ethnicity has been associated with a history of having had a child in care in women with a psychotic illness (Howard et al. 2001). However, the relationship between mental illness, socio-economic deprivation, ethnicity and children being in care has not been adequately explored (Howard et al. 2000). Our hypotheses were, therefore, that socio-economic deprivation, lone parenthood, the diagnosis of a psychotic illness and belonging to an ethnic minority would be associated with an increased risk of being discharged from a mother and baby unit with the baby under social services supervision.

Women may be admitted to mother and baby units because of their acute or chronic illnesses, or because of concerns about parenting capacity resulting in assess-
ment. We aimed to identify which clinical and social factors predicted a poor outcome in mother and baby units so that preventative interventions can be effectively directed.

**The Marce database**

The Marce database was set up in September 1996 and consists of consecutive admissions to the participating psychiatric mother and baby units in the UK. Participating centres complete the Marce clinical checklist which provides details of the mother and infant, and clinical observations through the admission; all data are anonymised. The database comprises 1255 cases to date and provides a unique opportunity to investigate outcomes and predictors of outcome using clinical information that is available to staff on any mother and baby unit.

Standardisation of ratings has been established for behavioural disturbance and maternal skills. Of raters who rated four videos of mother-interviewer and staff-interviewer scenarios, 90% agreed with the principal centre on the same outcome for behavioural disturbance, 82% identified women who experienced problems when carrying out physical care of their infants, and 93% correctly identified mothers who experienced problems with emotional responsiveness. A total of 86% agreed with the main centre which mothers were at risk of harming their children (Salmon et al. 2003).

**Subjects and methods**

A case-control study was carried out on women admitted to a mother and baby unit or facility, with data on the Marce database. Cases were women with a psychiatric disorder who, on discharge from the mother and baby unit, left either with their baby under formal supervision by social services (on the ‘at risk’ register or under a protection order) or without their baby (i.e. baby is fostered or adopted, or in any form of statutory care). Controls were women with a psychiatric disorder who were discharged from the unit with their infant under no supervision.

The Marce database provided details of patients’ socio-demographic characteristics, psychiatric history, substance misuse and supervision of the baby. We included only those who acted on their thoughts in the self-harm and harm to infant categories. We included any woman who breastfed for any length of time in the breastfeeding group. We grouped together “positive symptoms” which include delusions, hallucinations or thought disorder, and “non-psychotic disorders” comprising anxiety disorders, obsessive compulsive disorder, and alcohol and substance misuse. Learning disability was included under “other disorders”. These diagnostic groupings were used for the analysis below.

**Statistical analysis**

Data analysis was carried out using Stata Version 6 (Statacorp 1999); 95% confidence intervals (95% CIs) are quoted and p values are all two-tailed. A descriptive analysis was carried out followed by logistic regression where variables were added to the model in a stepwise fashion and were included if they confounded a predictor of the outcome, or contributed to the model at a significance level of p = 0.05 using the likelihood ratio test. The variables “staff assessments of parenting”, “living in a supervised unit”, “harm to infant” and “reason for referral” were not included in the logistic regression models as they would be an inevitable part of the decision to supervise on discharge.

**Power calculation**

In all, 276 (22%) mothers were considered to be at serious risk of a failure of parenting, i.e. the babies were placed under formal supervision or were discharged to voluntary foster or statutory care. Assuming that one-fifth of mothers have no cohabiting partner or a diagnosis of schizophrenia, an odds ratio of 2.0 for differences in marital status or diagnosis could be detected at a significance level of p = 0.05 and statistical power of 80% (Epi-info6).

**Results**

There were 1255 mothers on the database in April 2001 with a mean age of 29.5 years (sd 5.8). Marital status was recorded for 1234 subjects: 845 (69%) were married, 303 (25%) were single, 70 (6%) were divorced, 3 (0.2%) were widowed and 13 (1%) were in the ‘other’ group. Social class was recorded for 1199 subjects: 293 (24%) were professional, 221 (18%) skilled manual, 522 (44%) were semi-skilled, 49 (4%) unclassified and 114 (10%) never employed. In all, 834 (67%) subjects were white, 134 (11%) were Black African, 100 (8%) were Indian, Pakistani or Bangladeshi, 76 (6%) Black Caribbean, 8 (0.6%) Chinese, and 89 (7%) were classified as ‘other’ (total n = 1241). The Chinese women were included in the ‘other’ category in the analysis below. Of 1127 primary diagnoses recorded, there were 479 (43%) subjects with depression, 251 (22%) schizophrenia, 185 (16%) bipolar disorder, 46 (4%) personality disorder, 35 (3%) patients had a diagnosis of anxiety/phobia/panic disorder, 17 (2%) obsessive compulsive disorder, 9 (1%) learning disability, 6 (1%) alcohol dependence, 3 (0.2%) substance dependence, 94 (8%) other and 2 (0.2%) had no diagnosis. Diagnoses were combined for the analyses as described in the method.

The median timing of onset of illness in the mothers was 1 week postpartum (n = 1058) (interquartile range 0–88 weeks). The median timing of referral of women was 2 weeks postpartum (n = 1189) (interquartile range 1–2 weeks) and the median timing of admission was 7 weeks (n = 1149) (interquartile range 0–80 weeks). The median timing of non-fatal injury to the child was 9 weeks (n = 34) (interquartile range 1–36 weeks).

**The characteristics of mothers with babies under supervision or in care**

The status of the baby at discharge was known in 1197 cases, and these cases are used for the case-control study analysis below. A total of 921 (77%) babies were discharged with mother, without formal supervision. The remainder were discharged with mother on the ‘at risk’ register (n = 75) (6%), with mother under a protection or care order (n = 81) (7%), into voluntary foster care