Risk of puerperal and non-puerperal recurrence of illness following bipolar affective puerperal (post-partum) psychosis

EMMA ROBERTSON, IAN JONES, SAYEED HAQUE, ROGER HOLDER and NICK CRADDOCK

Summary The clinical value of information on the risk of future psychiatric illness in women who have experienced puerperal (post-partum) psychosis has been limited by inconsistencies in terminology and nosology. Here we report rates of subsequent puerperal and non-puerperal episodes, in a well-characterised sample of women diagnosed with clearly defined bipolar affective puerperal psychosis (n=103). Out of 54 women having further children, 31 (57%; 95% CI 44–69) experienced an additional puerperal psychotic episode, and 64 of 103 women (62%; 95% CI 52–71) experienced a non-puerperal affective episode during the follow-up period (mean duration 9 years). A history of bipolar episodes prior to the puerperal psychosis did not predict risk following subsequent pregnancies, but positive family history of mental illness predicted shorter time to non-puerperal relapse.

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Puerperal psychosis is an abrupt onset of severe psychiatric disturbance that occurs shortly following parturition in approximately 1–2 per 1000 deliveries. Despite wide variations in details of definition, it is known that most cases represent triggering by childbirth of episodes of bipolar disorder (Chaudron & Pies, 2003). Strikingly, up to a half of parous women with a lifetime diagnosis of bipolar disorder develop an episode of puerperal psychosis in the period immediately following childbirth (Brockington, 1996; Jones & Craddock, 2001). Such episodes usually require hospitalisation and are associated with substantial functional impairment and risk both to the woman herself and, in rare but tragic cases, to her newborn child.

Unfortunately, inconsistencies in terminology and nosology often result in a failure to provide patients with the information they need to make important decisions about family planning and illness management (Robertson & Lyons, 2003). In this short report we quantify the rates of puerperal and non-puerperal recurrences in a large sample of women diagnosed with clearly defined bipolar affective puerperal psychosis, and provide evidence that a simple clinical variable – family history – may be prognostically useful.

METHOD

The study group comprised 103 women, all UK residents, who had experienced at least one episode of puerperal psychosis. Their mean age at interview was 40 years (s.d.=8). After giving written informed consent, all participants were interviewed by a trained investigator using the Schedules for Assessment in Neuropsychiatry (SCAN; Wing *et al*, 1990) and case-note information was obtained. Best-estimate episode and lifetime diagnoses were made on the basis of all available clinical information by two independent investigators. The family history interview of the Research Diagnostic Criteria (Spitzer *et al*, 1978) was used to elicit family histories of mental illness. Each participant's illness history from the first episode of puerperal psychosis (mean age 28 years, s.d.=4.8) was studied in depth and the number and timing of episodes of bipolar illness recorded. Full details of the clinical method are provided by Robertson *et al* (2000).

RESULTS

All participants had experienced at least one episode of bipolar affective puerperal psychosis, defined as onset of a manic or psychotic episode within 4 weeks of childbirth, and all had a lifetime best-estimate DSM–IV (American Psychiatric Association, 1994) diagnosis of bipolar disorder (n=90) or schizoaffective disorder, bipolar type (n=13). Median follow-up time from recovery from the puerperal episode to interview was 9 years (range 6 months to 33 years). Thirty women (29%) had a previous psychiatric history (defined as DSM–IV major depression, mania or hypomania before the puerperal episode) and 59 (57%) had a positive family history of psychiatric illness, defined as the participant reporting at least one first- or second-degree relative diagnosed with or treated for a psychiatric disorder.

Recurrence rates of puerperal psychotic episodes

Fifty-four participants had a subsequent delivery, of whom 31 (57%; 95% CI 44–69) experienced another episode of puerperal psychosis, and an additional 5 (9%; 95% CI 4–20) experienced an episode of mania, depression or psychosis during pregnancy or within 6 months (but not 6 weeks) of delivery. Using contingency table analysis, neither family history nor personal history of psychiatric illness was a significant predictor of puerperal recurrence in this sample. Of the 39 women for whom the index episode of puerperal psychosis was their first episode, 22 (56%) experienced a further episode following their subsequent delivery, compared with 8 of 15 women (53%) who had experienced other episodes of illness prior to the initial puerperal psychosis (χ^2=0.04, d.f.=1, P=0.84).

Risk of further non-puerperal episodes of illness

Following the index episode of puerperal psychosis, 64 participants (62%; 95% CI 52–71) experienced at least one non-puerperal affective episode (DSM–IV mania, depression or hypomania) during the period of observation. Because of differing duration of follow-up, Kaplan–Meier survival curves were used to examine the influences of personal history and family history of psychiatric illness on time to non-puerperal relapse. A shorter time to non-puerperal recurrence was associated significantly with a positive family history of mental illness (mean survival 4 years *v.* 7 years; log-rank statistic 6.53, d.f.=1, $P<0.01$; Fig. 1) and non-significantly with

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previous personal history of illness (mean survival 4 years *v.* 6 years; log-rank statistic 1.48, d.f.=1, P=0.22).

DISCUSSION

Our findings are consistent with – and extend – previous research that used a wider phenotypic definition of post-partum psychosis, in finding high rates of recurrence of both puerperal and non-puerperal episodes of major mood disorder (Kirpinar *et al*, 1999; Terp *et al*, 1999; Robling *et al*, 2000). We have quantified these risks in a sample of women with clearly defined bipolar affective puerperal psychosis. We found the rates of recurrence following further deliveries were considerably higher than the rates we had reported for women with bipolar disorder in general (26% of deliveries in familial bipolar disorder; Jones & Craddock, 2001). However, we found no evidence that women whose puerperal psychosis is the first episode of illness have a different risk following subsequent deliveries than women who had previously experienced non-puerperal episodes.

We also provide data regarding the time course of risk for non-puerperal recurrences and evidence that family history may be a useful predictor regarding the timing of risk. The latter finding requires replication in independent samples before it can be regarded as a robust prognostic predictor.

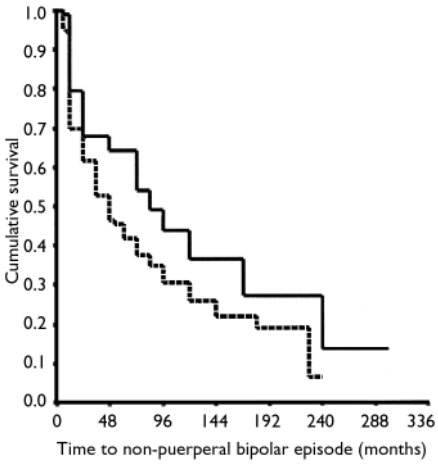

Fig. 1 Kaplan–Meier survival curves showing influence of family history of psychiatric illness (positive history, dashed line; negative history, solid line) on time to non-puerperal relapse in women following an index episode of bipolar affective puerperal psychosis. The fixed starting-point was the index episode of puerperal psychosis, the end-point was the study interview. Subsequent pregnancies were recorded as censored values.

Clinical relevance

Our findings have clinical relevance for the management of women who have experienced or are at risk of an episode of bipolar affective puerperal psychosis.

Family planning

It is vital to be aware of the high risk of puerperal recurrence, but avoiding further pregnancy (as has often been advised in the past) is not a guarantee of avoiding further illness. Many women in our sample reported that they were not made aware of the substantial risks of non-puerperal episodes of illness and made ill-informed reproductive decisions as a consequence. Moreover, we found no evidence to suggest that women who have only experienced a puerperal episode should be considered at higher risk of further post-partum episodes than women who had also had non-puerperal episodes.

Prophylaxis

Although lithium is an effective prophylactic medication in bipolar disorder for many patients, it must be taken regularly, has a narrow therapeutic window, several undesirable adverse effects and is teratogenic to the foetus. Other agents used in prophylaxis – such as sodium valproate or carbamazepine – have similar properties. Decisions regarding prophylaxis of bipolar disorder in women of childbearing age require very careful weighing up of risks and benefits, need to be based on robust evidence, and should be made jointly with the patient. Our data will inform this situation and suggest that a simple clinical predictor (family history) may help to individualise the risk assessment.

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