Brit. J. Psychiat. (1983), **142,** 618–620

Recurrent Post-Partum Psychosis
A Model for Prospective Clinical Investigation

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Summary: Two women who both experienced a psychotic illness after each of three consecutive pregnancies are described. Subjects who are at high risk for post-partum psychotic breakdown offer an almost unique opportunity for prospective tests of hypotheses about the aetiology of severe mental illness.

Psychotic breakdown is a consistent, but relatively rare, complication of childbirth. Primiparae are at greater risk than multiparae and so, possibly, are women who have had difficulties in labour and delivery—eg dystocia and Caesarian section (Paffenbarger, 1964; Kendell *et al,* 1981a). The evidence for a genetic predisposition is as uncertain as the suggested links with psycho-social variables (see review by Brockington *et al,* 1982). It is virtually impossible, therefore, to pick out in advance the 0.1 per cent –0.2 per cent of mothers who are likely to require admission to mental hospital shortly after delivery. There are two small sub-groups, however, in whom the probability of a puerperal psychosis is more than a hundredfold higher than the general population at risk. These are women who have had a previous puerperal psychotic illness (Paffenbarger, 1964; Artensen, 1968; Protheroe, 1969) and possibly those with a history of manic depressive illness (Bratfos and Haug, 1966). The case histories of two women with recurrent puerperal psychoses are described here. They illustrate how it may be possible to mount a systematic prospective investigation of the nature, course and possible causes of this form of severe mental illness.

Case 1

Background: She was an illegitimate child who had been brought up by her mother and maternal grandmother; she had had a generally happy childhood, but in adolescence had experimented with drugs—LSD and cannabis regularly, and amphetamines occasionally. At the age of 18 she had had a termination of pregnancy, prior to which she was seen by a psychiatrist. She was described as a lively and cheerful person, with no history of affective disturbance other than a tendency to be irritable before periods. There was no relevant family history of illness.

Pregnancy 1: Aged 25 yrs—this was planned and, aside from threatened miscarriage at five months, uneventful. She had, however, been intermittently miserable and weepy, upset about stopping her work and about her cramped accommodation. Labour was induced because she was two weeks overdue and she was delivered normally of a healthy male infant. On the 5th day post-partum she was noted to be distressed and weepy and on the 7th day she became unaccountably excitable, overactive and disinhibited. She thought she had special powers (extrasensory perception), was preoccupied with religious ideas and with her illegitimacy. She wanted to leave hospital in order to find her father. There was also a suggestion that she was experiencing auditory hallucinations. She was transferred to a psychiatric ward (with her baby), treated with chlorpromazine and propranolol and recovered rapidly over a period of 4–6 weeks.

Pregnancy 2: Aged 28 years—this was again planned and uneventful and was followed by normal labour and delivery of a healthy girl. Nothing untoward was recorded until the 4th day post-partum when she was seen to be writing continuously and noted to be expressing religiose ideas. On the 9th day she began to suffer from insomnia, was overtalkative, restless and overactive. Her behaviour was bizarre, eg she wrapped her baby in wet towels. She was transferred to a psychiatric ward and treated with haloperidol, chlorpromazine and propranolol. Recovery was a little slower this time and she was discharged home after 9 weeks.

Pregnancy 3: Aged 30 years—this pregnancy was unplanned and was due to contraceptive failure; the baby was nevertheless wanted as soon as she discovered she had conceived. A formal assessment of her mental state one month prior to delivery revealed no abnormality. Four days before delivery she fell down some stairs with her daughter, avoided injury to

herself, but the daughter aged 2 sustained a fractured tibia and fibula. On the next day her son developed chicken pox. Labour and delivery were again normal and for the first two days she was her usual self. On the third day, the only abnormality on interview was slight disinhibition and mild euphoria. By day 7 she was elated, laughing infectiously, beginning to sleep poorly and was moved to a psychiatric ward. Her condition worsened perceptibly on the 10th day when, simultaneously, she came out in a chicken-pox rash. She was overactive, somewhat promiscuous and disinhibited in an amicable sort of way. She showed pressure of speech, flight of ideas and punning. There were no abnormal experiences and she was well oriented. Treatment with chlorpromazine and haloperidol was started and there was rapid improvement over the next two weeks. She was discharged home after eight weeks.

Diagnosis

On the first occasion a provisional diagnosis of a schizophrenic illness was entertained, but with hindsight the clinical picture on all three admissions is consistent with that of a manic depressive psychosis—manic type.

Case 2

Background: She was a housewife who had been diagnosed as a chronic paranoid schizophrenic; she had a history of 8 admissions to mental hospital since the age of 20 and she had been maintained more or less continuously on anti-psychotic drugs (depot injections) during the previous 10 years. Her father had been in a mental hospital on several occasions with a schizo-affective disorder and her mother had been hospitalized once with an illness which had been described as schizophreniform.

Pregnancy 1: Aged 26 years—this was unplanned and she married the father in the 3rd month. Depot injections were stopped for about three months and then recommenced at 6 months because she was depressed. She was given 40 mg flupenthixol two days prior to delivery and again 5 days after the birth of a healthy girl. Despite this, on the fifth day she was noted to be confused, deluded, experiencing auditory hallucinations and her mood was described as "fluctuating". Following transfer to a psychiatric ward, additional medication (haloperidol and chlorpromazine), together with a course of 12 ECT, was given and she made a slow recovery over 5 months. Her baby was fostered for part of her in-patient stay.

Pregnancy 2: Aged 29 years—the baby was planned and wanted and, apart from a comment in her medical notes that she was more talkative and restless in the 9th month, there were no other changes of note in her mental condition. Depot injections of flupenthixol had been stopped as soon as pregnancy was confirmed and she remained well off all medication. She was delivered of a healthy boy and there were no further problems until the 9th day post-partum when she abruptly became overactive and talkative, with pressure of speech and flight of ideas. She also described ideas of influence and later there were prominent paranoid delusions. An initial trial of lithium was unsuccessful and she settled gradually with oral chlorpromazine over the course of the next three and a half months.

Pregnancy 3: Aged 32 years—this baby was again planned and wanted. She was maintained on a small night-time dose of chlorpromazine (50 mg) and remained well apart from mild depression in the second trimester. The baby was unexpectedly born at home and she had a post-partum haemorrhage requiring blood transfusion. On the second day, she was interviewed by a psychiatrist and, just as in pregnancy there were no major abnormalities in her mental state. On the 6th day, however, she became increasingly agitated, perplexed and anxious; she was also overtalkative, irritable and disinhibited. A few days later, delusions of reference and paranoid ideation were noted and also passivity experiences. She was treated as before with chlorpromazine and then flupenthixol and her illness pursued a fluctuating course. She was discharged home with improvement of her florid symptoms after fifteen weeks.

Diagnosis

She was thought to have had a relapse of her paranoid schizophrenic illness after the first baby and on the next two occasions the picture was more like that of a schizoaffective disorder.

Discussion

These two case histories show that it is feasible to mount a prospective study of women who are at high risk for developing puerperal mental illness. Collecting and repeatedly studying such a sample in a longitudinal manner is a daunting prospect because the subjects are thinly spread across many practices and hospital catchment areas. They do, however, afford a unique opportunity to test aetiological hypotheses e.g. about the relative contributions of environmental and physiological factors. These two women were seen regularly during their third pregnancies and they both remained relatively well. Targum *et al* (1979) have described a few subjects with a history of manic-depressive psychosis who stopped their lithium therapy in order to have a baby, remained well in pregnancy and then broke down after delivery. Baker *et al* (1961) have commented on the possibility that

pregnancy has an ameliorative effect in patients with schizophrenic illnesses. How, if at all, pregnancy exerts a protective effect is an intriguing and possibly important question.

Both subjects were interviewed by a psychiatrist after they had delivered and before the onset of their psychotic illnesses, and it was therefore possible to observe some of the prodromata. More frequent and structured assessments of such women in the days following delivery may help to elucidate the relevance of transient mood disturbances, sometimes labelled as the "maternity blues" (Kendell *et al*, 1981b; Stein, 1982; Kumar and Robson, 1983).

The most compelling feature of this model for research is that is allows anticipatory collections of important data, eg about life events (cf Brown and Harris, 1978; Paykel *et al*, 1980; and Kumar and Robson, 1983) and about selected physiological markers (Brockington *et al*, 1982; Whalley *et al*, 1982). The time of onset or otherwise of a psychotic breakdown can almost be calendar dated months in advance and, apart from periodic or cyclical affective illnesses (eg Gjessing, 1976; Jenner *et al*, 1967), there are few other conditions in clinical psychiatry which permit one systematically to study severe mental illness in a prospective manner. The development of rational methods of treatment and prevention is the ultimate goal. The preliminary stages of a larger scale study along these lines are now under way.

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(Received 19 January 1983)