SPRINGER, S. P. & SEARLEMAN, A. (1980) Left-handedness in twins: implications for the mechanisms underlying cerebral asymmetry of function. In *Neuropsychology of Left-Handedness* (ed. J. Herron). New York: Academic Press.

WOODRUFF, R. & PITTS, F. N. (1964) Monozygotic twins with obsessional illness. American Journal of Psychiatry, 120, 1075-1080.

*Suck Won Kim, MD, Staff Psychiatrist, Hennepin County Medical Center, and Assistant Professor of Psychiatry, University of Minnesota; Maurice W. Dysken, MD, Associate Professor of Psychiatry, University of Minnesota; Mark D. Kline, MD, Assistant Clinical Professor of Psychiatry, and Adjunct Associate Professor of Bioengineering, Syracuse University, Syracuse, New York

*Correspondence: Department of Psychiatry, Hennepin County Medical Center, 701 Park Avenue, Minneapolis, Minnesota 55415, USA

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Pseudocyesis Associated with Folie à Deux

GABRIELLE L. MILNER and GWILYM D. HAYES

A case of a mother and daughter who both believed in their own pregnancy and that of the other is described.

DeMontyel (1881) divided folie à deux into three subgroups: *folie simultanée*, in which there is the coincidental, simultaneous but independent appearance of psychotic symptoms in two family members who are predisposed to a psychosis and who are living together; *folie communiquée*, in which two persons who are at risk from developing a psychosis become psychotic, but each subject adopts one or more delusions from the other and retains them after separation; and *folie imposée*, in which the psychotic subject transmits symptoms to a previously healthy individual who elaborates on these.

Pseudocyesis is the conviction of a non-pregnant woman that she is pregnant. It is distinguished from other forms of false pregnancy such as that stemming from a psychosis, pregnancy associated with malingering, and pseudopregnancy occurring when a tumour or other defect causes endocrine changes simulating pregnancy (Steinberg, 1946). It has been considered to originate from an awareness of a recent bodily change or disturbance linked to a conscious wish, fantasy or fear about pregnancy (Brown & Barglow, 1971). The condition may be a form of hysterical conversion (Hardwick & Fitzpatrick, 1981) or depression may be present (Murray & Abraham, 1978). Several findings have been noted in pseudocyesis: elevation of prolactin levels (Devane et al, 1985), a trend towards low levels of folliclestimulating hormone (FSH) (Zarate et al, 1974), and the occasional persistence of a corpus luteum (Moulton, 1942).

It has been suggested that the physiological changes seen in pseudocyesis may be caused by an imbalance of pituitary-ovarian function mediated by neurotransmitters in the pituitary and/or hypothalamus (Starkman et al, 1985). Brown & Barglow (1971) suggested that depression via cortical and limbic systems causes a decrease in available biogenic amines, resulting in an abnormality of the release of luteinising-hormone releasing factor (LRF), FSH releasing factor (FRF), and prolactin inhibitory factor (PIF) at the median eminence of the hypothalamus. This results in decreased levels of luteinising hormone (LH) and FSH, which lead to the suppression of ovulation and result in amenorrhoea. The increased level of prolactin leads to lactation and also possibly a persistent corpus luteum which may also lead to amenorrhoea. This hypothesis may explain some of the symptoms in pseudocyesis.

Case report

Miss MK is a 27-year-old single second-generation Jamaican and a qualified midwife. Her mother, aged 50, who was born in Jamaica, is a single housewife. She came

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to the UK in 1961 and has not worked since then. She has never married, although her six daughters and two sons have the same father. She lives with five of her daughters.

MK was referred from the labour ward of a neighbouring hospital, where she had been diagnosed as having a phantom pregnancy. She held this conviction of pregnancy despite being shown the negative ultrasound scan. She had no previous psychiatric or medical history. MK had recently finished a relationship with a boyfriend, in which she had been sexually active.

On admission she claimed a gestation of seven months accompanied by amenorrhoea, increasing size of her breasts, early-morning sickness, and experiencing the baby kicking. These ideas, together with the false belief that her mother had been killed in a plane crash, were held with delusional intensity. She did not exhibit any objective signs of pregnancy; there was no post-partum haemorrhage. On admission she seemed confused and perplexed. She was experiencing auditory hallucinations in the second and third person, had thought disorder, and delusional misinterpretation. Her affect was low. After a few days she took her own discharge, her symptoms not being severe enough to detain her.

Two weeks after her discharge, MK's mother was admitted. Her mother had been admitted 12 years previously, and diagnosed as suffering from 'religious mania'. However, she was not thought to be mentally ill. She had had no contact with the psychiatric services for the past 12 years. On this admission her mother claimed to have been pregnant for the past ten years. She appeared to be experiencing an acute paranoid psychosis and although not seeking any medical attention, had indeed firmly held her delusion for the past ten years. It is interesting that her six daughters and two sons all share her and MK's false beliefs. After 12 days, her paranoid symptoms abating somewhat, the mother took her discharge, still with her delusion of pregnancy. When seen at home, although seemingly free of her psychotic symptoms, she still believed that she would be in the Guinness Book of Records one day as a result of the length of the gestation.

A few days later MK was readmitted in a state similar to the original condition. After treatment with oral neuroleptics her more acute psychotic symptoms resolved and she was discharged at her request after a stay of one week. MK kept her delusions of pregnancy well past her postulated term, while engaged in supportive psychotherapy and while obtaining her own flat. Her mother is still deluded.

Discussion

Although there have been no recent reports of pseudocyesis affecting a mother and daughter, in 1651 William Harvey described pseudocyesis affecting two sisters (Hunter & Macalpine, 1963); pseudocyesis affecting one sister, implicitly believed by the other, has also been reported (Hardwick & Fitzpatrick, 1981). In our case both mother and daughter firmly believed in their own pregnancy and that of the other. The mother's abdomen was enlarged and, as her daughter before her, she believed she felt the foetus moving. Abdominal X-ray was normal. Her daughter also described menstrual disturbances (although she had scanty regular bleeds) and the release of colostrum from both breasts (although there was no evidence of this). Both women had an acute psychotic episode, which resolved to leave the fixed idea of pregnancy.

Pseudocyesis is usually distinguished from a hallucinatory pregnancy stemming from a psychosis. However, in the case described there is no evidence that the women are psychotic at present. It seems that both women exhibit pseudocyesis and folie à deux.

Various treatments have been suggested for pseudocyesis. The diagnosis should be revealed to all patients by showing pelvic X-ray and ultrasound examinations (Kroger, 1962). In the daughter's case, ultrasound examination did not convince her that her pregnancy was not real. Supportive psychotherapy was provided during the length of her illness. However, resolution of her symptoms occurred only after she had moved to her own flat, away from the influence of her mother.

Her mother maintains she is pregnant, in spite of the evidence. She refuses to engage in treatment.

If pseudocyesis is considered as a heterogeneous condition, therapy will vary depending on the nature of the patient's symptoms. Psychotherapy should range from supportive to insight orientated (Barglow & Brown, 1972). Exploration and clarification of unconscious feelings about and attitudes towards pregnancy may be an essential aspect of treatment. Drug treatment for depression may be indicated (Starkman *et al*, 1985).

The prognosis is highly variable. Fried *et al* (1951) and Scopbach *et al* (1952) reported that merely revealing the true diagnosis resulted in transient remission in 13 of 27 patients, although all of these had a recurrence within six months. Supportive psychotherapy resulted in complete and lasting resolution of symptoms in 6 of 11 patients. The combination of psychotherapy and testosterone injections or uterine curettage proved to be effective in five remaining patients.

We believe this is the first case reported of a mother and daughter exhibiting pseudocyesis as a symptom in a case of folie à deux.

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References

- BARGLOW, P. & BROWN, E. (1972) Pseudocyesis. Modern Perspectives in Psycho-obstetrics. New York: Brunner/Mazel.
- BROWN, E. & BARGLOW, P. (1971) Pseudocyesis. A paradigm for psychophysiological interactions. Archives of General Psychiatry, 24, 221-229.
 DEMONTYEL, E. M. (1881) Contribution a l'etude de la folie a deux.
- DEMONTYEI, E. M. (1881) Contribution a l'étude de la foile a deux. Annals Medico Psychologiques Journal de L'Allienation Mentale et de la Medecine Legal des Aliens, 6 serie. Paris: G. Masson. DEVANE, G. W., VERA, M. I., BUHI, W. C., et al (1985) Opioid
- peptides in pseudocyesis. Obstetrics and Gynecology, **65**, 183–188.
- FRIED, P. H., RAKAFF, A. E., SCHOPBACH, R. R., et al. (1951) Pseudocyesis. A psychosomatic study in gynecology. Journal of the American Medical Association, 145, 1329-1335.
- HARDWICK, P. & FITZPATRICK, C. (1981) Fear, folie and phantom pregnancy. Pseudocyesis in a fifteen year old girl. *British Journal* of Psychiatry, 139, 558-560.

- HUNTER, R. & MACALPINE, I. (1963) Three Hundred Years of Psychiatry, p. 130. London: Oxford University Press.
- KROGER, W. S. (1962) Obstetrics, Gynecology and Endocrinology. Springfield, Illinois: Charles C. Thomas.
- MOULTON, R. (1942) The psychosomatic implications of pseudocyesis. *Psychosomatic Medicine*, 4, 376-389.
- MURRAY, J. L. & ABRAHAM, G. E. (1978) Pseudo-cyesis a review. Obstetrics and Gynecology, 51, 627-631.
- SHOPBACH, R. R., FRIED, P. H. & RAKOFF, A. E. (1952) Pseudocyesis. A psychosomatic disorder. *Psychosomatic Medicine*, 24, 129-134.
- STARKMAN, M. N., MARSHALL, J. C., LA FERLA, J., et al (1985) Pseudocyesis: psychological and neuroendocrine interrelationships. Psychosomatic Medicine, 47, 46-47.
- STEINBERG, A. (1946) Psychoendocrine relationships in pseudocyesis. Psychosomatic Medicine, 8, 176-179.
- ZARATE, A., CAVALES, J. S., JACOBS, L. S., et al (1974) Gonadotrophin and prolactin secretion in human pseudocyesis. Annales d'endocrinologie, 35, 445-450.

*Gabrielle L. Milner, MB, ChB, MRCPsych, Senior Registrar, All Saints' Hospital, currently Senior Registrar, West Midlands Rotational Scheme; Gwilym D. Hayes, MB, ChB, MRCPsych, All Saints' Hospital, Birmingham, currently Senior Registrar, Sheffield Rotational Scheme

*Correspondence: Department of Psychiatry, Walsgrave Hospital, Clifford Bridge Road, Walsgrave, Coventry CV2 2DX

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Folie à Deux: A Socio-psychiatric Study

N. R. PANDE and D. M. GULABANI

A classic case of folie à deux from India is described in a couple unrelated to each other. The need for socio-cultural understanding of the clinical phenomenon and its implications is stressed.

By far the most comprehensive description of folie à deux is that given by Lasegue & Falret (1877), in their very first paper. Later literature reports cases verifying the original description (Enoch & Trethowan, 1980), as well as isolated case reports of association or combination of certain psychiatric conditions with folie à deux: Down's syndrome (Meakin & Renovoize, 1987), and Capgras syndrome and de Clerambault's syndrome (Signer & Ibister, 1987). Gralnick (1942) analysed the frequency of family relationships between the two partners in a series of 103 cases reported between 1877 and 1942. He also classified the syndrome into four subtypes. Soni & Rockley (1974) described socioclinical aspects of the syndrome after retrospective analysis of long case histories. Here we report a case with emphasis on the socio-clinical substrate, and its prognostic as well as therapeutic implications.

Case report

Mr A, a 28-year-old Roman Catholic bachelor of Indian origin, had been working as a clerk in the Middle East for seven years. It was reported that he had changed his lifestyle three years after the death of his mother. He had believed that he was a 'born again' Christian and was enlightened by the Holy Spirit. Accordingly, he had been associating himself with a staunch religious group abroad. He had started praying excessively.

He returned to India five days before admission to our hospital and presented to us with frank psychotic behaviour. On examination, he had delirious perplexity and delusions of persecution and grandeur. He misidentified patients in wards as Jews in disguise. He was extremely irritable and guarded. He did not have any cognitive deficits. There was no history of substance abuse. He showed significant improvement with haloperidol in the 12-15 days after admission.