Pregnancy, Delivery and Mental Health

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Abstract: Pregnancy and delivery have a major impact on the mental health of women, and give rise to many conditions mainly including maternity blues, postpartum depression, and puerperal psychosis, and also including psychiatric symptoms, neurosis, personality disorders and alcohol or drug dependence. While the incidence of maternity blues among postpartum women is high, the symptoms are improved spontaneously with no sequelae. On the other hand, postpartum depression persists for longer periods, leading to insufficient mother-infant interaction and further to the developmental disturbance of infants. Although puerperal psychosis is infrequent, it is commonly associated with delusion and the risk of infanticide. When mothers have this type of mental health problem, they cannot adequately take care of their children and develop feelings of guilt toward their children. Therefore, support for child rearing should be given to mothers. In order to foster mother-infant interaction, it might be helpful to room mothers and their infants together in hospitals, as well as to prescribe psychotropic drugs the safety of which has been confirmed in terms of transfer to breast milk, in promoting the normal development of children and preventing mothers from developing feelings of guilt. In order to prevent the occurrence of, and promote recovery from, the symptoms of psychosis, measures should be taken to remove anxiety and conflict among pregnant women attributable to psychological and social factors.

Key words: Maternity blues; Postpartum depression; Puerperal psychosis; Psychological and social factors

Introduction

There are three major mental health problems associated with pregnancy and delivery that are categorized as major puerperal psychiatric disorders (maternity blues, postpartum depression and puerperal psychosis), but include many disorders, which may have already developed during the gestation period, such as transient anxiety and confusion, neurosis, personality disorder, and drug or alcohol dependence, etc. Mental health problems which significantly impair the well being of mothers and their children are also deleterious to the children’s mental health.
fathers, making fathers more prone to suffer psychological derangement, which, in turn, produces problems within the entire family.

In modern society, pregnancy, delivery and child rearing are deemed to be personal events, and it is difficult for women undergoing these events to obtain assistance from others. In addition, the motives for deciding to become pregnant or to deliver a child as well as the roles to be played by women have recently undergone major changes. Furthermore, the life styles of married couples and the marital state itself have also moved away from those that were generally accepted in the past. As a result, young couples’ problems cannot necessarily be resolved through consultation with their parents.

In this complicated social situation, women who deliver and rear children become burdened with various major psychological stresses, which not only produces problems with maternal health but also problems in the children to be reared by such mothers. The psychological influence of, and psychosis associated with, pregnancy and delivery, are described herein, together with the social factors contributing to their occurrence and ways of dealing with them.

Psychological Profile of Pregnant Women

For women, pregnancy is frequently a fight against conflicting feelings. In other words, pregnancy is indeed a joy, but, in many cases, it is accompanied by anxiety and issues requiring resolution, and generates both positive and negative feelings. In addition, in cases of unwanted or unexpected pregnancy, pregnancy is recognized as a nuisance, so women with such pregnancy will have unstable and mixed feelings even when they decide to carry to term.

Pregnant women become more psychologically stable in the second trimester than in the first trimester, but in the third trimester, they again become emotionally unstable due to anxiety about the pregnancy itself or about related complications. Moreover, relationships between pregnant women and their husbands undergo substantial changes. In other words, simple relationships between women and their husbands undergo a transformation in which the recognition that their husbands are family members rather than partners is implanted. At this stage, pregnant women are convinced that they will be unable to obtain support or assistance from their husbands, if their husbands do not show interest in becoming a parent. In such cases, stress can be removed when pregnant women themselves have the ability to solve problems, but women who lack such ability begin to have subconscious anxiety about child rearing and become emotionally unstable. In addition, in cases where delivered infants require a lot of looking after due to congenital abnormalities or diseases, or cases where women cannot take adequate care of their children because of their own jobs or diseases, they will be subjected to conflicting feelings in rearing the child, and feel unable to love it or that it is obstructing their own lives. Even women who had been emotionally stable without children, may, after delivery, complain of difficulties in child rearing, experience weepiness, loneliness, etc., and may continue to seek assistance with child rearing from their parents or husbands. This may hinder new mothers from becoming mature mothers. Therefore, in such cases, education of, and support to, new mothers is essential.

Labor Pains and Self-control

There are individual differences in uterine contractions and labor pains, and the degree of uterine contraction is not necessarily proportional to the severity of the pain. A pregnant woman who has anxiety or fear about delivery is thought to be psychologically sensitive and will tend to feel relatively strong labor pains. Read(1) (1949) considered that anxiety and fear about delivery caused spastic uterine contraction, leading to severe labor pains, and named
the phenomenon “fear pain tension syndrome.” On the other hand, Morris\(^3\) (1983) claimed that fear directly affects the cerebral cortex, leading to the development of severe labor pains. In addition, some researchers insist that labor pain is a conditioned response.

In addition, when a women in labor loses self-control, she may abruptly become agitated using violent language or shouting to reject delivery, or may struggle and become restless. However, once she has delivered her baby, she will settle down and become so quiet that no one is aware of her existence after delivery. Morris indicated that women who have experienced such delivery themselves feel disappointed in their behavior. In cases where a women has experienced negative psychological factors such as anxiety and fear during gestation and, unfortunately, has gone into labor without having confided in someone or dealt with such mental health problems, she may lose psychological self-control during delivery.

Women are forced into the realization that delivery is an unexpectedly harsh experience from which one cannot turn back and will realize that there is no escape other than to go through with the delivery. In addition, during delivery, women feel that no one can remove the burden on their shoulders or help them, resulting in the development of negative feelings toward their husbands and the unborn child. Therefore, delivery in the presence of persons who can have sympathy with women in labor, including their husbands, their mothers, and doulas\(^3\) (attendants who take care of women during delivery), may effectively reduce the above-mentioned psychological impact of delivery on women.

### Types of Psychological Disorders

There is almost no difference between the types of psychological disorders which may occur before delivery and those occurring postpartum. Psychological disorders observed during the postpartum period include postpartum depression and puerperal psychosis (schizophrenia). In addition to these disorders, various diseases or symptoms have been observed after delivery, including anxiety, manic-depressive psychosis, schizophrenia, personality disorder, agoraphobia, drug dependence, alcohol dependence, anorexia, and obsessive-compulsive neurosis. In the current Diagnostic and Statistical Manual of Mental Disorders — Fourth Edition (DSM-IV; 1994) published by the American Psychiatric Association (ICD-10; 1992), these disorders are not regarded as obstetrically specific diseases and are classified into the categories of common mental disorders.

#### Maternity Blues

Maternity blues, which is also dubbed 3-day blues, are the symptoms of depression which appear 3–4 days after delivery, including depressed mood, anxiety, weepiness, irritability, insomnia and fatigue.

Brockington and Kumar\(^4\) (1988) also included the following in the category of maternity blues symptoms: headache, derangement, forgetfulness, feeling of restlessness, depersonalization (feelings of unreality), negative feelings toward infants, thirst, anorexia, and breast engorgement. These symptoms usually disappear in a short time, and do not adversely affect mothers or their children in the long term.

Kumar and Robson\(^5\) (1984) failed to establish conclusive evidence that maternity blues are associated with postpartum depression. However, Dennerstein \textit{et al.}\(^6\) (1989) claimed that a relationship existed between maternity blues and late postpartum depression. The incidence of maternity blues is estimated to be 50–80\% (Yalom \textit{et al.}\(^7\) 1968; Pitt\(^8\) 1973), which varies among country, ethnic group or investigator. In Japan, the incidence of maternity blues in pregnant women is said to be more than 50\%, which is somewhat lower than that in North America and Europe. Such difference in the estimated incidence of maternity blues is thought to be caused by the fact that the oppor-
tunity for diagnosing maternity blues tends to be missed because, for example, the symptoms are apt to be mild and to disappear in a short period of time, as well as by differences in cultural factors. Multiple etiologic factors, as opposed to a single factor, are thought to be truly involved in the development of maternity blues.

Unlike in depression, the symptoms of maternity blues disappear in a short period of time. Therefore, even in cases where women experience negative feelings toward newborns because of difficult delivery or painful obstetric procedures during delivery, such feelings would be driven away, inducing few effects on the development of the newborn child (Robson and Kumar, 1980).

Maternity blues are treated symptomatically, and, if necessary, with antianxiety or hypnotic drugs. During the symptomatic treatment of maternity blues, breast feeding is not contraindicated, although if mothers of newborns and family members are nervous, it may be better, in terms of recuperation and mental health, to feed the baby artificially on the day (night) of delivery and to allow the mother to get sufficient sleep. Although antianxiety drugs are transferred to newborns by way of breast milk, the doses used to achieve night sedation can be administered with almost no safety concern (Matheson et al., 1990). Erkkola and Kanto (1972) reported, however, that diazepam transferred into breast milk and that breastfeeding during administration of this drug was a risk factor for inactivity of children. Therefore, in cases where the mother requires continuous administration of diazepam, attention should be paid to the ability of the baby to suckle its mothers’ breast and to the development of children who are breast-fed by such mothers.

Postpartum Depression; Puerperal Depression

The incidence of depression occurring during the first year postpartum center around the period from the 6th-puerperal week to the 8th-puerperal month. The incidence of postpartum depression is 10–15% (Kumar and Robson, 1984). Based on the DSMIII diagnostic criteria, Okano (1984) indicated that the incidence of postpartum depression in Japan in 1988 was 3.2%, much lower than the 15% in Britain and the 10% in the U.S. Moreover, the incidence of postpartum depression in 1990 according to the Research Diagnostic Criteria was 8.2% in Japan, which was again much lower than the 14.9% in Britain or the 19–26% in the U.S. One factor contributing to this low incidence in Japan is delivery at the home of the maternal grandparents, which has recently become the focus of attention. Taking these data into account, psychological, social and cultural factors are thought to be of major relevance to the prevention and treatment of psychological disorders associated with pregnancy and delivery. Therefore, support and assistance from husbands, parents and friends or, as a substitute, those from the community or society are essential.

The problem with postpartum depression is that its detection and diagnosis tend to be delayed, because it often manifests after postpartum women have discontinued regular visits to obstetricians, i.e., after hospital discharge or after the completion of 1st-month postnatal examination. Consequently, the maternal depressive state can be sustained for long periods, with the result that maternal love for children and mother-infant interaction may be weakened, leading to the disturbed development of the child (Coghill et al., 1986; Caplan et al., 1989). In addition, husbands of postpartum women are also affected and sometimes develop depression and/or the women commit suicide with their children.

The symptoms of postpartum depression include weepiness, depressed mood and anxiety. The symptom of depressed mood is likely to be aggravated in the evening. Women with postpartum depression have strong feelings of anxiety about their children, and experience
feelings of guilt due to their inability to undertake child care. Furthermore, in cases where newborns have siblings, mothers are afraid that they might feel jealous of the babies. In addition, women with postpartum depression may have feelings of guilt because of their inability to care for family members or undertake household chores. Other symptoms of postpartum depression include insomnia, which mainly manifests as difficulty in falling asleep, as well as feelings of restlessness, diminished interest, decreased appetite, decreased libido, etc.

Development of postpartum depression is associated with many factors, and cannot be explained only in terms of fluctuations in biological factors. However, the following psychological and social factors are generally thought to be associated with the development of postpartum depression: brittle, vulnerable and neurotic personality; history of depression or depression associated with menstrual cycle. The recurrence rate in women with a history of such depression after a previous delivery is estimated to be 50% or higher.

Risk factors for postpartum depression include a history of depression or infertility and primiparity at older ages. Another possible associated factor is the experience, before the development of postpartum depression, of serious events such as the death of a parent or change in marital state. Furthermore, in some studies by Fisher et al. (1997), combinations of the following factors are judged to be risk factors for postpartum depression: High academic achievement; private medical insurance; delivery by caesarian section at older ages; and breast feeding.

Taking into account access to primary care, it is desirable that diagnosis of postpartum depression be given, through active approaches to postpartum women, by general physicians, psychotherapists, or obstetricians and gynecologists, and, in some cases, pediatricians who routinely examine children, as well as maternity nurses or public health nurses, etc. The Edinburgh postnatal depression scale (EPDS) published by Cox et al., and the Hamilton Depression Rating Scale (HAMD), etc. are available as methods of screening for postpartum depression. The severity of depression can be evaluated based on the duration of depression, its intensity (patients’ feelings and stage of depression), as well as the presence or absence of suicide ideation or a suicide attempt, etc. When a postpartum woman has a concrete plan to commit suicide, she may be at risk of putting the plan into action.

The idea of committing infanticide may arise in cases, for example, where postpartum women are subjected to fear and agony because they believe that it is better for “a bad mother” to dissociate herself from her baby or they fear injuring the child.

Postpartum depression is treated by medication, as well as with cognitive therapy, psychotherapy, therapeutic methods established by supporters’ groups, etc. Women with moderate to severe depression or with suicide ideation should be hospitalized in the department of psychiatry. In order both to treat the depression, and to remove feelings of guilt as well as the notion of being an inadequate mother, through learning the methods of child care to establish mother-infant interaction, it is better for mothers not to be separated from their children. However, it is difficult to conduct child care in psychiatric hospitals, so it is ideal for a mother and her baby to be roomed together in a facility with units for mothers and children. Risk factors for postpartum depression which deserve special mention include a history of depression, family history of depression, marital problems, severe neurosis, and sexual abuse in childhood. Conversely, postpartum depression can be prevented by dealing appropriately with these risk factors.

Since antidepressants need to be used for several weeks in the medical treatment of postpartum depression, informed consent should be obtained from patients prior to the initiation of such treatment. While tricyclic antidepressants are most commonly prescribed, those
with longer half-lives are not suitable for the treatment of postpartum depression, because they are transferred into breast milk. Buist et al.\textsuperscript{16} (1995) examined the association between the concentration of dosulepin (dothiepin), an antidepressant, in breast milk with child development, and stated that, in the follow-up conducted for several years subsequent to the lactation period, no abnormality in the development of children was observed even in cases where transfer of the drug into breast milk had been detected during lactation. This is due to the fact that infants have a high metabolic function, leading to rapid excretion of the drug from the body (Wilson,\textsuperscript{17} 1980). Recently, SSRIs (selective serotonin reuptake inhibitors) and other new drugs are also used in the treatment for depression.

Psychotherapy for patients with postpartum depression covers family counseling, management of psychological factors such as anger and conflict, relationships between mothers and their children, promotion of the recognition of becoming parents, and methods of relaxation, and deals with problems between mothers and their children. Measures to be taken to manage patient anxiety with postpartum depression include periodical visits by family members or friends, avoidance of leaving patients in a solitary state for long periods, regular relaxation, cognitive therapy, and so on. In addition, according to Ballard\textsuperscript{18} (1994), the incidence of psychosis among the husbands of women with postpartum depression is also high, and there may be cases where both the woman and her husband suffer from depression after childbirth.

In order to prevent postpartum depression, women should undergo periodical medical examinations before and after delivery, and their husbands should give support for the resolution of problems with motherhood by attending such periodical medical examinations with their wives. Therefore, education for both parties on becoming parents and on the prevention of psychic traumata caused by delivery should be given. When women are in the early puerperal period, their husbands should take time off work and take care of their wives, or, in cases where women have already delivered children (siblings of newborns), should seek their parents’ help to leave those children in their charge. Furthermore, cooperation with, for example, public health nurses in the community, especially maternity nurses giving consultation on breast feeding, is effective in preventing postpartum depression. In the treatment of intractable cases, cooperation among two or more doctors or multidisciplinary cooperation is also required.

**Postpartum Psychosis**

Among the psychoses occurring after delivery, puerperal psychosis is associated with the most severe symptoms. Unlike maternity blues or depression, the incidence of puerperal psychosis in Japan is as low as 1–2 cases/1,000 deliveries (incidence: 0.1–0.2%), which is similar to the figures in the world. Most symptoms of puerperal psychosis manifest in the first puerperal week, and diagnosis is made easily based on the symptoms. Patients with puerperal psychosis often complain of delusion and anxiety about newborns, and suffer from auditory hallucination, hallucination, emotional upset, incoherence of thought, agitation, derangement, perturbation, etc.

Puerperal psychosis is treated medically with chlorpromazine, haloperidol, lithium, etc., and in cases presenting with depression, tricyclic antidepressants are prescribed. During treatment, it is necessary to hospitalize patients with puerperal psychosis. With regard to this hospitalization, hospital stays with the child are ideal for the promotion of mother-infant interaction. Unlike in cases of depression, children of mothers with puerperal psychosis are to be given artificial nutrition. Women whose babies are being given artificial nutrition should be made to take an active role in caring for their child by the assistance of staff in due consideration of easing any feelings of guilt that such mothers
may harbor toward their children.

In patients with puerperal psychosis, the prognosis is better as compared to those who developed non-puerperal psychosis, and symptoms undergo comparatively rapid improvement. Although patients with puerperal psychosis rarely commit suicide, they might commit infanticide if they believe that their lives are being obstructed by their children. According to Kendell (1970), risk factors for puerperal psychosis include primiparity, unstable marital state, premature delivery, experience of stillbirth, delivery by caesarean section, etc. In addition to these factors, family history of puerperal psychosis, history of puerperal psychosis, psychic traumata caused by delivery, experience of massive bleeding during delivery, etc. are also thought to be risk factors.

Other Psychoses during Puerperal Period

In addition to the major postpartum psychiatric diseases mentioned above, neurosis, hypochondria, drug dependence, drinking alcohol, etc. also affect the mental health of women after delivery. Since all of these diseases may develop before pregnancy, it can be said that they are also attitudinal or behavioral problems. When a woman with neurosis who has experienced strong anxiety and been making regular use of anti-anxiety drugs becomes pregnant, concern may arise that the effects of the drugs might be exercised on the fetus. However, maternal use of anti-anxiety drugs does not necessarily cause developmental abnormalities, so administration of such drugs is often continued after adequate informed consent is obtained from the mother.

Postpartum women who are exposed to domestic violence by husband or who have experienced psychological or physical violence (sexual violence in childhood, in particular) by their parents, have keen anxiety about becoming parents, and tend to complain of insomnia, headache and pains in other parts of the body, unidentified symptoms, etc. In addition, such women sometimes become addicted to drugs or alcohol to escape from emotional and physical distress. In the presence of severe premenstrual tension syndrome, such women have stronger anxiety that they may ill-treat their children.

In order to cope with the above-mentioned problems, medical treatment, as well as psychotherapy, assistance from husbands or parents, etc. are required. In addition, it is desirable that women with postpartum psychological disorders should deal with such problems through cooperation with obstetricians and gynecologists, psychiatrists, physicians, pediatricians, psychotherapists, etc.

Conclusion

The mental health of women during pregnancy, as well as during and after delivery is thought to be affected by a combination of psychological, social and cultural factors. Therefore, when a couple planning to have a child face problems with mental health, assistance and help should be given to the couple. In order to assist such couples, it is necessary to recognize anxiety or conscious/subconscious conflict among pregnant women, and to take measures to enable them to get assistance from their husbands and parents as well as social assistance, and to further promote early diagnosis and treatment. Moreover, obstetricians and gynecologists should play leading roles in preventing the occurrence of mental health problems associated with pregnancy and delivery, through association with specialists at other departments.

REFERENCES


