Postpartum Psychiatric Illness

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"Psychiatric illness which develops after childbirth is one of the most challenging problems of modern medicine. It usually occurs acutely and unexpectedly from a state of apparent good health. The patient is disabled at precisely the moment when her responsibilities and her capacity for enjoyment of life are greatest."[1]

Postpartum mental illness was first described by Hippocrates in the 4th century B.C. He hypothesized that these illnesses resulted from suppressed lochial discharge being carried to the head, or from a diversion of milk from the breast to the brain, or from blood collecting at the breasts; and these theories of etiology persisted for over two thousand years. In 1838, Esquirol dispelled a great deal of the mysticism surrounding the disease, and during the remainder of the 19th century, considerable interest in the problem arose. In 1858, Marcé published a very comprehensive study of the subject; however, his work has been variously interpreted. One group claims that Marcé challenged traditional views, maintaining that there was nothing specific about puerperal mental illness, and that this did not differ from nonpuerperal psychoses. Others maintain Marcé thought the syndromes of postpartum mental illness to be quite different from those observed in nonpuerperal illness; and that he believed that these illnesses occurred along with the profound physiological changes in the female genital organs, postulating a connection between organic changes and the emergence of psychological symptoms. Following Marcé, a host of authors published work on the subject. However, the general concensus of American opinion towards the end of the 19th century was that the condition was a syndrome or collection of diseases and not a disease entity.

Inconsistencies in definition and classification, and the lack of uniformity in diagnostic criteria have resulted in much difficulty in comparing and correlating the data and conclusions of various workers. Since the turn of the century, however, there have been two schools of thought as to the etiology and hence classification of these diseases:

(1) There is no specific mental disorder occurring in relation to childbearing, and childbearing serves only to precipitate latent disease, rather than acting as a primary causative factor.
(2) These diseases are a separate entity and physiological factors play an important etiological role.

The following are among the proponents of the first point of view. Boyd (1942)[2] stated that from a psychiatric viewpoint, childbearing imposes various physical, physiological, psychological and social stresses upon the pregnant female. He emphasized the importance of psychological factors in etiology. Although he could not demonstrate a major traumatic episode in the majority of cases, he proposed that the cumulative effect of numerous small difficulties serve as the exciting cause of puerperal mental illness; whether or not such appears is dependent on the makeup of each individual patient.

Brew (1950)[3], in his series on postpartum psychoses, found that 14% had a family history of psychosis, and in 60% a definite abnormal personality makeup could be determined; 23% of the patients gave a history of a mental disorder associated with a previous parturition. He stated: "It is now generally agreed that no such entity *per se* exists. Again, it is found that the psychoses associated with pregnancy occur in predisposed individuals."

Foundeur (1957)[4] compared a psychotic postpartum group with a large, carefully selected psychotic nonpuerperal control group. He found no statistically significant difference between the two groups either in respect to the number of previous episodes of mental illness, the number of previous hospitalizations, in diagnosis or prognosis. Thus he felt the two groups were derived from the same theoretical population and he, too, concluded that postpartum illness is not a psychiatric entity.

Thomas and Gordon (1959)[5] also did a very extensive review of the subject. They felt that the time relationship of the psychoses associated with pregnancy, with the peak of cases shortly after delivery, was too striking to exclude pregnancy as a factor in causation. They hypothesized that childbirth acts as one of a number of precipitating events against a background of host constitution, inherited or acquired, and predisposes to psychosis, the psychosis being nonspecific and indistinguishable from those unrelated to pregnancy and delivery.

Numerous other workers supported this view that pregnancy and parturition were precipitating rather than causative factors; and that these patients would have developed an identical psychosis if subjected to any other stress of like force and intensity.

However, much evidence has also been accumulating in support of the second theory. The remainder of this paper deals with this material and is orientated in this direction. Paffenbarger (1961)[6] did a very comprehensive survey comparing a psychotic group with a normal control group. He found no differences between the two groups relating to prenatal or perinatal factors, and no significant data which

might suggest psychic stress in the psychotic group. Thus he feels that these data suggest an etiology that is active during pregnancy but exerts its full effect only after parturition. He postulates that the etiological factor is some physical or physiological influence— such as a metabolic upset from hormone imbalance (perhaps through loss of the hormone-producing placenta, an infection or even a gross nutritional deficiency. He speculates, then, that the postpartum psychoses are primarily of somatic rather than psychic origin.

Hamilton[1] is one of the most recent and strongest proponents of a physiological etiology, and the idea that these are a separate, distinct group of psychotic diseases. Much of the discussion to follow on specific syndromes and their treatments relates to his work.

INCIDENCE

In the U.S., about 4,000 women are severely disabled by this disease each year, i.e., about one per one thousand births; probably many times this number suffer lesser degrees of disability. Various estimates suggest that postpartum mental illness is responsible for three to eight percent of female admissions to mental hospitals. Of the seriously ill, most recover, but about one in five is permanently incapacitated, and many additional ones experience lesser degrees of mood and personality deterioration. Evidence seems to indicate that there has been little or no change in incidence over the past one hundred years, and there is also no evidence of an improved prognosis.

CLINICAL SYNDROMES

The principle syndromes which appear are delirium, affective (manic and depressive) and dissociative (schizophrenia) ; each of these three major groups accounts for about one-third of the cases. However, before discussing each more specifically, there are certain features common to all three. There is a latent asymptomatic period lasting in almost all cases for more than three days. Many patients begin to show their symptoms from the third to seventh day postpartum, and over half do so by the end of two weeks. There is usually a characteristic pattern of prodromal symptoms lasting for one to several days. Early prodromal symptoms include insomnia ("miserable sleeplessness"), restlessness, exhaustion, depression, irritability, etc.; later ones include confusion, irrationality and suspicion. When the illness becomes full-blown, diagnosis may be made according to one of the classifications mentioned above. Another important feature of postpartum mental illness is the variability, changeability and unpredictability of symptoms—moving from one syndrome to another or embodying features of two or more syndromes. Also there is a strong tendency to relapse after a period of improvement. Nonpuerperal syndromes, on the other hand, are relatively circumscribed and their course more predictable. There are a wide variety of non-specific concurrent physical complaints as well.

Delirium Syndromes: Hamilton feels that postpartum delirium has certain specific characteristics which differentiate it from nonpuerperal delirium states:

(1) It arises out of a state of health, rather than out of infection or toxicity.

(2) Frequently there are one or two outstanding symptoms which detract from the essential nature of the syndrome.

(3) It is usually of longer duration than nonpuerperal delirium, and therefore the element of fatigue from sleeplessness and restlessness is more marked.

(4) Of the several postpartum syndromes, however, delirium is likely to show the most rapid recovery.

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(5) It is often of only moderate severity, in which case there may be extended lucid and restful intervals followed by relapse, as differentiated from a continuous delirium; this is more inclined to induce despair.

(6) The content of the delirium is often heavily weighted with material concerning sex and the baby.

(7) Again, variability and transitions to other syndromes are very common.

Affective Syndromes: These differ from nonpuerperal mania and depression in the following features:

(1) The course of nonpuerperal mania or depression is quite variable but tends toward recovery, either spontaneously or with treatment, and afterwards the personality is much the same as it was before. Mania and depression subsequent to childbirth, however, do not have as favorable a prognosis. Postpartum mania may evolve into persisting depression or into a dissociative state characterized by fixed distortions of ideation. Postpartum depression even when treated tends to recur more frequently than other varieties of depression.

(2) Affective syndromes in the puerperium often follow delirium when the latter subsides; or some delirium symptoms may be mixed with those of depression, but varying patterns of development can occur.

(3) Early cases are more likely to have manic qualities, while later ones are more likely to be depressive.

Hegarty (1955)[7] studied seven cases of what he called "post-puerperal recurrent depression"; he feels that the personality, history and symptoms are quite different from what is characteristic of "ordinary" recurrent depressions, which usually enjoy much longer symptom-free periods than do these. He describes the leading features as recurrent depression, irritability and tension dating from a typical but mild attack of puerperal depression; the symptoms tend to be worse in the premenstrual phase and appear to be related to the premenstrual tension syndrome. He feels that perhaps some alteration in constitution supervenes (such as a tendency to premenstrual water intoxication) which increases susceptability to depressive attacks.

Hemphill (1952)[8] did a ten-year study of all cases delivered at maternity hospitals in Bristol. He feels it is not possible to ascribe importance to psychological factors apart from the personality of the family and the family history. He believes puerperal depression (which he differentiates from manic-depressive states) to be a psychiatric entity. He notes a resemblance to involutional melancholia in personality type, symptomatology and in that each follows an endocrine event and is prolonged. He found these cases extremely intractable, even when treated with electro-convulsive therapy, which is not as good or as certain as in nonpuerperal affective illness; if untreated, although perhaps persisting for a year or more, eventual recovery was usual. He also found that empirical hormone therapy (see treatment) produced or assisted in remissions in some cases.

Dissociative Syndromes: Hemphill also feels puerperal schizophrenia is an entity. This appeared in the first few days, either as an acute schizophrenia with delusions, hallucinations and sometimes catatonic stupor and irrational, impulsive behaviour; or as a mixed psychosis with schizophrenic elements and marked affective disturbances. As a rule there was no indication of impending psychotic illness until after the child was born. These differed from ordinary schizophrenia in that they were incurable in spite of the presence of good prognostic criteria — in ordinary schizophrenia, good prognostic criteria are early treatment (here treatment was

very early), good pre-psychotic personality (personality was optimal; patients were sociable, had made good contacts and married) and absence of endocrine abnormalities (patients were fertile and with no obvious endocrine abnormalities). Hemphill concludes that there is no evidence to substantiate the assumption that psychological factors operating in predisposed individuals are responsible for puerperal mental illness; on the contrary, he found pregnant and puerperal women extremely resistent to the stresses and strains of life.

Hamilton considered the following to be characteristics of the dissociative syndromes specific to those occurring in the puerperium:

(1) The disease is acute rather than chronic, at least in onset and with regard to prodromal symptoms.

(2) There is often the perservation of many normal capabilities, such as the capacity to think at times with a considerable degree of logic and to relate to other people at times.

(3) The most common postpartum dissociation is ideational, as reflected in the large proportion of paranoid diagnoses in early cases; chronic cases have a greater tendency to resemble other varieties of schizophrenia. Also, distortion of sexual ideation occurs frequently.

(4) Ordinarily the nonpuerperal schizophrenias develop along fairly consistent lines in the individual case; a high proportion of puerperal patients demonstrate mixed or changing syndromes.

(5) Confusion, disorientation and hallucinations are more common in postpartum dissociative syndromes.

(6) He agrees with Hemphill on the poor results with treatment; also, with treatment, and sometimes without, a profound postpartum dissociative process may suddenly remit; this is much less common in nonpuerperal schizophrenia.

TREATMENT

Prophylaxis may be carried out through early educational preparation for parenthood for both sexes, and through the identification of patients who may become psychotic; this last requires a careful psychiatric history on the part of the obstetrician, an early recognition of prodromal signs and symptoms. Victoroff (1952)[9] suggests basing preventive therapy on: a search for techniques by which the patient's ego may be bolstered; re-education to the end that feminine goals may be found desirable and esteemed; encouragement of insight in the patient as to the nature of her reaction; control and limitation of stress factors in the environment; discreet use of appropriate hormones (estrogens, progesterone, thyroid); adequate medical care and supervision of mother and child; prompt use of electro-convulsive therapy in the presence of impending suicidal and homicidal drives.

Treatment may be divided into five categories:

(1) General therapy.

This includes hospitalization in a controlled environment in most cases; adequate bed rest in well-lighted, simple surroundings; adequate fluid intake and caloric maintainance with a high vitamin intake; a minimum of examinations and manipulations; and sedative tub baths, etc. to aid in relaxation.

(2) Drug therapy.

The indications and contraindications regarding the use of drugs here is much the same as in the nonpuerperal psychoses. Although an important aspect of therapy, due to the limitations of space, a discussion of this subject will not be presented here.

(3) Shock therapy.

(a) Delirium syndromes—subcoma insulin has been found to be useful when the condition is prolonged or where there is a problem in maintaining nutrition, reducing anxiety or inhibiting manic outbursts.

(b) Affective syndromes—Electro-convulsive therapy may be curative in itself, or may produce a remission which brings the patient to a state where she is amenable to other treatment; however, there is an appreciably higher relapse rate than with the use of electro-convulsive therapy in nonpuerperal cases.

(c) Dissociative syndromes—Electro-convulsive therapy is regarded as the treatment of choice when the symptoms persist after the fourth to sixth week postpartum.

(4) Hormone therapy.

(a) Progesterone — Schmidt (1943)[10] believes that the favorable prognosis, common recurrences following subsequent pregnancies, and the fact that postpartum psychotic patients do not develop a psychosis subsequent to the ordinary stresses and strains of life, point to the probability that these conditions are due to some physiological disturbance. He suggested that a hormonal upset results at the end of pregnancy due to the removal of the progesterone-producing placenta. He cites premenstrual tension as further evidence that mental changes may result from a hormonal imbalance; since exacerbations occur premenstrually, he feels periodic postpartum psychosis may be considered in the same category as an extreme premenstrual tension. Billig and Bradley (1946)[11] also noticed the occurrence of frequent exacerbations of a psychosis in the premenstrual period, and theorized that progesterone production might be decreased or deficient in such cases. Bower and Altschule (1956)[12] studied a series of patients all of whom had had electro-convulsive therapy followed by a relapse. After treatment with large doses of progesterone, the relapse rate was 6.3% in one group, as compared with 43.6% in the control group. However, progesterone without preceding electro-convulsive therapy was not effective in terminating psychiatric symptoms.

(b) Thyroid extract and triiodothyronine—Danowski (1950)[13] found that in pregnancy the average PBI levels were considerably elevated as compared with a nonpregnant control group. Then one to two months postpartum, the levels fell below nonpregnant levels and remained low for over nine months. Since prolonged hypothyroidism is known to be associated with characteristic psychological symptoms, an etiological relationship was suspected. Flach (1958)[14] noted a moderate to marked improvement in over one-half of twenty-four patients he studied and treated with triiodothyronine. According to Hamilton, thyroid deprivation seems to be a significant factor in postpartum psychosis beginning or continuing after the first two to four weeks of the puerperium. He studied twenty-nine cases which, in addition to the usual psychotherapy, symptomatic medical therapy and electro-convulsive therapy, were given dessicated thyroid; his results were much improved over those in his previous studies. To another four depressive patients he gave triiodothyronine, and in three to four days, all were improved to the point where hospitalization was considered unnecessary; all recovered and remained well. Ballachey (1958)[15] studied twelve cases in which treatment with triiodothyronine was interrupted with placebos using a double-blind technique; with triiodothyronine he noted rapid improvement of such symptoms as confusion, delirium, depression and excessive fatigue; there were no failures, nor was hospitalization or electro-convulsive therapy considered necessary.

Such therapy is felt to be most useful in the later depressive and delirium syndromes. These authors still feel, however, that thyroid extract and triiodothyronine should not be a substitute to total psychiatric and medical management.

(c) Pituitary hormones—Sheehan described psychiatric disturbances which were seen in known instances of postpartum pituitary necrosis; he suggested that some of the late postpartum syndromes may represent selective inhibition of the pituitary trophic hormones.

(d) Adrenocortical hormones—some of these hormones are also capable of acute and profound psychiatric disturbances. These differ from most organic psychoses in their acuteness of onset and in their tendency towards insomnia, restlessness, excitement and euphoria; they are also likely to involve further departure from reality in thought and content than psychiatric reactions involving other hormones. Some of these characteristics have a striking similarity to the occasional psychosis of the early puerperium. Jacobides (1957)[16] noted that urinary adrenocortical steroids in postpartum psychiatric illness showed a greater scatter of values than normally, with a tendency to high values of 17-hydroxycorticoid excretion at the beginning of illness or in phases of excitement, and a fall towards normal values with improvement. The two obvious alternate interpretations are (i) that these high values could be a reflection of emotionally-induced hypersecretion of the adrenal cortex, or (ii) that the hormonal events of the puerperium occasionally result in a situation in which excessive amounts of one or more specific 17-hydroxycorticoids are produced, and that an excess of these steroids is responsible for many of the postpartum psychiatric syndromes.

(5) Psychotherapy.

It is generally agreed that this is still the most important single treatment in postpartum psychiatric illness, and must dominate the total management of the case.

(i) Since it is felt that isolation generates and accelerates the dissociation, this should be prevented by continual contact with familiar and understanding persons, and by giving the patient realistic and uncomplicated explanations for her distress and psychological experiences; she should also be given direct and honest explanations of all treatments and procedures.

(ii) Control of behaviour should be attempted by gentle persuasion and reassurance.

(iii) The patient should be diverted from hallucinatory material by focusing her attention on realistic problems. Detailed questions should concern with current symptoms and their development in the puerperium; this leads the patient to think that she is suffering from an acute illness rather than from a lifelong personal deficiency, and it can be implied that the illness can be overcome.

(iv) Discussion of the onset and nature of sleep difficulties often suggest that much of the hallucinatory material is of the nature of dreams rather than reality.

(v) Since delusions and hallucinations often centre around the baby and husband, contact with these figures should be minimized; this should be explained in terms of protecting her from anxiety, not in terms of protection of the baby, and also that it was the physician, not the husband, who suggested their limited association.

(vi) Since the mental state is very labile, it may be necessary to visit the patient very frequently, even several times a day. Hospitalization is recommended, not only to afford relief from the burden of household chores and infant care, but also from the continual reminder that the patient is not behaving as a new mother should.

(vii) One should avoid giving a prognosis and suspected time of recovery to the patient.

SUMMARY:

This paper deals with the problem of postpartum psychiatric illness. A brief historical survey is presented, followed by a summary of some of the arguments and evidence supporting each of the two opposing views on etiology. For the sake of brevity, the details of the various studies mentioned has been omitted, but full references are given in all cases. The paper concludes with a discussion of the current theories and methods of treatment.

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