

PREGNANCY STRESS AND MATERNAL PERCEPTIONS OF INFANT ENDOWMENT

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INTRODUCTION

A substantial number of mothers present themselves in children's psychiatric or child development clinics with complaints relative to the child which are couched in terms suggesting brain damage, retardation or other primary defect but which cannot be substantiated through careful testing and evaluation. As we have examined the pregnancy histories of these women, we have been able to uncover, in most instances, some experiences which the mother found to be so stressful as to interfere with her normal adaptation to the process of pregnancy (and the immediate care of the neonate). In many instances, these experiences have either been repressed or minimized in their importance so that they have not even been revealed to previous examiners or discussed in a clinical situation.

The preliminary conclusions * described in this paper grow out of a combined experience in a University Hospital prenatal clinic and a child psychiatry and mental retardation outpatient service. They indicate that maternal exposure to any one or combination of a number of stress factors during the course of pregnancy and the neonatal period may deplete the mother's capacity to form an internalized image of the fetus and infant as an intact and rewarding human being to care for; and subsequently, her capacity to experience the needed early closeness with the offspring. *It is most noteworthy that these alterations often appear to be markedly disproportionate to the apparent importance of the stress itself.*

These observations are given further support by the findings of Rose (1961, 1962) and others (Bibring, 1959 and Bibring, *et al*, 1961, Pavenstedt, 1961) who have pointed out that even minor stresses which may be brought to bear on the mother during pregnancy may have a lasting effect on the woman's adjustment as a mother and on the subsequent developmental outcome in the child.

It would appear that there is not only little relationship between the intensity of the stress and subsequent maladaptive behaviour but actually little relationship between the specific *nature* of the stress and its effect on the mother and infant. We are less clear on how significant the timing of the stress may be. At this writing, we are not impressed with the importance of this parameter either. In effect, our tentative position would be that maternal capacity for "reading" the infant's behaviour and for developing a close emotional tie to him may be compromised by *any* kind of stress, of *any* intensity, occurring at *any* point during the pregnancy or neonatal period.

* This pilot study has stimulated the development of a formal, long term research project which will be reported in subsequent communications.

CASE ILLUSTRATIONS

The following illustrations may be useful for clarification:

A. Conception

A 26-year-old mother applied for service for her four-year-old son whom she described as withdrawn, inaccessible and ritualistic. She revealed that the child had been conceived out of wedlock following a Christmas party during which she had become intoxicated and had gone out with a young man in whom she had had very little interest. She had become extremely upset when she learned that she was pregnant, thought of seeking an illegal abortion but rejected this alternative on a religious basis. Subsequently, she and the young man married "in order to give the child a father" and, surprisingly, she reported that the marriage had worked out fairly well. As a matter of fact, they had had a second child, now aged two, whom both parents adored and who appeared to be doing quite well developmentally. The first child, however, had been one in whom she had never felt any deep investment. She reported that when she thought of the baby growing inside of her after learning of the pregnancy, she had been extremely guilty because she felt that it had been forced on her against her will and without her knowledge and that she could not have any warm feelings for the fetus when she had no relationship with the father. Subsequently, following the birth of the baby, she recalls that she cared for it to the best of her ability but that the baby never became a very important person to her. She did not speak very much to him, did not handle him except around daily routines and tended not to take him places with her but rather to get sitters. She felt that her behaviour with the second baby was quite different and could not explain it. She noted that as the patient reached his second year, he became increasingly difficult to "reach", did not seem to be developing as rapidly as the children of her friends and began to show mannerisms and rituals such as rocking and hand movements. At the time of application for clinic treatment, *she had questioned her pediatrician concerning whether the child was badly brain damaged*. A complete survey of the child did not reveal any organic deficit or intellectual retardation.

B. Early Pregnancy

A 32-year-old mother who was a school teacher married to a successful accountant, *described her six-year-old son as possibly having cerebral palsy*. She based this on his active and irritable behaviour with her and had come to the conclusion that there was something seriously defective in his equipment for self-organization and impulse control. She reported that this child was the product of her second pregnancy, the first having ended in a spontaneous abortion at three months gestation. She recalled that the obstetrician had comforted her at that time with the statement that when pregnancies ended in this way, it was because the child was usually damaged or malformed and that this was nature's way of taking care of its "mistakes". During the first few months of her second pregnancy, the mother found that she was spotting and staining again and became frightened. She was put to bed and given many "shots" so that she would retain the pregnancy. All during this period she reports that she kept wondering to herself "Why don't they let it come out? If I am bleeding, it's because there is something wrong with the baby and it *should* come out". She could recall vividly how each time that she bled she would say to herself "There goes another toe or another finger". During the subsequent course of her pregnancy, she felt quite well but never stopped worrying about the baby. When the child was born, she examined it carefully and could find no overt signs of defect but subsequently watched the child carefully for signs of inner difficulties. When he proved to be an active, inquisitive boy with rather low thresholds to stimulation she became increasingly concerned that, indeed, inborn defect was showing itself in this way. She continued to supervise him very closely in an effort to control his behaviour and to help him "be more quiet and calm".

C. Late Pregnancy

A 37-year-old housewife described her five-year-old son as antisocial, more interested in things than people and, generally slow in development. This child was the fourth of seven children in a family which was described by the pediatrician as being quite stable and mature. The father was a successful business man and the mother a housewife who appeared to enjoy her role and to be quite successful in the care of her home and in the rearing of her children. All of the other children seemed developmentally advanced and socially mature. The patient had been studied by a variety of pediatricians and neurologists and no satisfactory explanation had been given for his current behaviour. During the initial phase of interviewing, the mother described her pregnancy as being uneventful or "normal". More detailed questioning revealed that during the last trimester she learned that her own mother had incurred a cerebral vascular accident. Since she had been the closest of the children to her mother, she travelled the 200 miles to her mother's home and cared for her during her first weeks of convalescence. About three weeks after she arrived, her mother suffered another stroke right before her eyes and died suddenly. The mother became quite depressed and preoccupied with her own welfare and with her relationship with her mother which had been a most warm and supportive one. She made no active preparations for the coming of the baby as she had on her previous pregnancies and stated that for the next eight or nine months that she was depressed and "out of sorts". She recalls very little about the actual labour and delivery with the patient and is rather amnesic for the first six months of the child's life. Her husband described that, although she was able to care for the child, she showed it little warmth or spontaneity and never played with it as she had with her other babies. In contrast also to her experience with the other children, she had *not been particularly interested in choosing a name for this child or for making the usual hospital and nursery arrangements.* The baby was described by the husband as being a rather passive, quiet infant who made few demands and who settled down to a regular, predictable schedule quite quickly. The child apparently had very little stimulation during his first year. When he was about 13 months old, the mother became pregnant with the fifth child. By this time she had recovered from her depression and seemed her former self. *During the current interviews, the mother could express her open conviction that the patient was retarded.*

D. Labour and Delivery

A 24-year-old housewife brought her four-year-old daughter for treatment with *complaints that the child seemed retarded, unable to care for herself and was markedly underweight.* This patient was the older of two children, the second aged two and one-half appeared to be progressing normally. The patient had had two previous hospitalizations at a hospital in a farm community where the family lived and no diagnosis had been made. A thorough evaluation of the child on this occasion revealed a small asthenic girl who related slowly and guardedly to strangers and had displayed a generally nonspecific and undifferentiated response to objects. Psychometric testing suggested normal potential. Metabolic studies indicated no abnormalities. Mother reported an uneventful pregnancy with this child although she does recall that the labor was somewhat prolonged and difficult. She reported half awakening from anesthesia as the baby was being delivered and hearing a nurse exclaim "the baby's cord is around its neck—I'm not sure if it's breathing". She recalls being alarmed but unable to respond. Postnatally she did not see the baby for two and a half days and could not find out what was wrong with the baby or why they would not bring it to her. When she did see it, she felt that there was a deep red mark around its neck and was sure that the baby had suffered from loss of oxygen and would present many problems in care. Reports from both the obstetri-

cian and the hospital indicate that the cord *was* around the baby's neck but it was quite loose, the baby's colour was good and there were no resuscitation problems. The baby is reported as having thrived in the nursery and the mother's postnatal course was uneventful. There was no reason to expect any difficulty with the child on the basis of the birth history. The mother further reports that when she got the baby home she tended to watch it extremely carefully and, when it appeared to be a rather slow, unresponsive and sleepy baby, this confirmed her fears that the child was retarded and very little could be expected of it.

E. Neonatal Period

A 40-year-old housewife wanted her six-year-old son given "mental tests and blood tests" prior to his enrolment in first grade in order to determine whether he was "alright to go to school". This boy, an only child, was conceived after thirteen years of marriage at a time when both parents had resigned themselves to not being able to have any children. Both parents had been "extremely thrilled" at the prospect of finally having a child, had made elaborate preparations and both had wanted a boy. They were very excited when they learned that the child was a boy but both parents were shocked to learn that the infant was mildly jaundiced, had an accessory digit on the left hand and first degree hypospadias. They were reassured following careful evaluation of the infant that there was no blood group incompatibility and that the minor congenital abnormalities could be easily corrected surgically. The father seemed to accept these reassurances but the mother was unable to and following removal of the accessory digit and a later plastic procedure for the hypospadias, she continued to watch the child very carefully for any signs of further weakness or defect. Each time the boy developed a minor upper respiratory infection or contracted one of the usual childhood contagious diseases the mother described herself as having "gone into a tail spin". *She seemed certain that the child would be unable to bear up under these stresses, that there was something fundamentally defective and weak in his inner structure and that he would not be able to measure up.* She did not send him to kindergarten even though this was available within the school district where the family lived. As the time for first grade approached, the mother experienced a rising sense of panic and made an application through her pediatrician for study of the child in an evaluation center for developmental problems.

DISCUSSION

In part, the writing of this paper was prompted by the recent observations by Green and Solnit (1964) who described the "vulnerable child syndrome". They encountered many cases in which, following recovery of a child who was expected to die, persistent parental fears are sometimes so potent as to color all subsequent management of the child and, therefore, the course of his development. The observations in our own clinics would certainly tend to confirm the frequent occurrence of this "child rearing syndrome". However, we have been even more impressed by the fact that the threat to the child's survival need not be of life or death proportions in order for abnormal fears concerning his state of intactness and future development to be present. In fact, as illustrated in some of the above cases, the stress may not directly involve the fetus or infant himself at all but *may simply be an intercurrent stress or contingency in the pregnancy situation which interferes with the adaptational process through which the mother is living.*

There is much evidence to indicate that the quality of the emotional affiliation to the fetus strongly influences the nature of the object tie between infant and mother postnatally; and that both of these phenomena are very basic determinants

in the nature of the child rearing experience and the specific configuration of developmental outcome in the child. Apparently, any forces which may interfere with the formation of this essential tie can be critical for the child's development. It is inherent in the crisis nature of pregnancy that the given stress need not be major or catastrophic in proportions in order to have this effect.

In each of the cases cited above, the nature of the maternal concern about the child can be said to be virtually the same, making allowance for semantic differences. That is, each mother expressed overt concern that her child was defective, weak or damaged in some way which she could not fully understand. In each instance, the mother experienced some significant stress at some point in the pregnancy process beginning with conception and ending with the neonatal period. Yet there seems to be little connection between the specific kinds of stress which were experienced and the eventual chief complaint which the mother presents for management. In the first instance, the conception of the child occurred with an unwanted mate and during a state of alcoholic intoxication. In the second, the pregnancy was threatened by early abortion. In the third, the mother experienced a significant personal loss during the last trimester of pregnancy. In the fourth, there was a mild and insignificant complication of delivery. In the fifth, the child developed mild jaundice neonatally and was learned to have two minor congenital defects.

On the surface, there is nothing to account for the intense concern which these mothers experienced about their children until one begins to explore with them *the pregnancy experience as an adaptational process rather than as simply a biological event.* (Davids, *et al.* (1961), Engstrom, *et al.* (1964), Blau (1964). It has been our experience that almost all of the mothers in this series of cases would report their pregnancies as being "normal" in response to the usual type of history taking. Certainly, by most obstetrical standards, these pregnancies *were* normal with the possible exception of the second case where there was some bleeding during the first trimester. It has been our tendency in the past, having received such a response from the mother, to dismiss the pregnancy and to go on to other matters involving the later development of the child.

We are now learning to spend more time in getting the mother to delineate, in some detail, what the pregnancy experience was as she perceived it (not whether it was simply "normal" by medical standards), what other stress contingencies may have been operating in the family at the same time, what the nature of her emotional supports were during this period and whether there were any other factors or forces operating to interfere with her preparation for having the child and her developing a stable relationship with it during the early days and weeks.

The work of Chess and her colleagues (Chess, *et al.* (1960), Thomas, *et al.* (1961) in studying primary reactive patterns in infants has also been helpful to us in this regard. If the mother is already entertaining fears about the intactness and capacity for self-organisation in the child as the result of some pregnancy stress, the idiosyncratic pattern of the child's responses to stimuli may, in some instances, reinforce her fears. In Case B, for instance, the baby proved to be an active one with low thresholds to stimulation. Although we have learned from Chess' (1) studies that this type of child simply represents one kind of reactivity pattern, the mother in this instance perceived the child as being active because his "defective machinery" deprived him of normal impulse controls. In Case D, on the other hand, the baby proved to be a rather passive, sleepy and unresponsive one. Because the mother already had concerns about its intactness, she began to interpret what was a normal pattern of responsiveness to stimuli as representing a state of brain damage in the child. Knowledge of these primary reactive states, therefore, is ex-

tremely important in counseling young mothers who may be concerned about the state of the infant.

Although we do not have figures to substantiate this, our impression is that first pregnancies are more vulnerable to stress than subsequent ones. The untried mother needs early reinforcement and feedback from the infant in order to reassure her concerning her adequacy for child rearing. Under stress, any perceptions of the infant which can be interpreted as unrewarding or without hope for normal developmental progression are very likely to interfere with the formation of a stable tie to the child and therefore tend to set up a vicious cycle in which the mother's fears may eventually be confirmed.

SUMMARY

Several cases are cited to indicate that stress incurred at any point during the adaptational process of pregnancy may seriously interfere with a favorable outcome of that process. In many instances, this has the effect of distorting the mother's capacity for objective perception of the infant's capacities. Pregnancy stresses are often converted into fears about the infant's or the child's survival or about his state of physiological and functional intactness. There appears to be little relationship between the nature of the stress and the subsequent pattern of maternal fears about the child. It is important to recognize the presence of these pathological child rearing attitudes as early as possible because they may prove to be significant influences in producing adverse developmental outcome in the child.

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