



ANTENATAL MATERNAL STRESS AND ITS EFFECT ON THE FETAL DEVELOPMENT – A HOMEOPATHIC ANALYSIS

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INTRODUCTION

The orderly manner in which a single cell, that is the fertilized ovum develops into a full fledged individual is nothing short of a miracle considering the thousands of stages at which the development could go wrong, it is considered remarkable that a very large number of children are born normal.

Behavioral and psychological developments in the fetus and parents are equally important. The uterus, although offering a degree of protection, is permeable to

- social
- psychological
- environmental influences.

The complex interplay between these forces and the physical transformations occurring in utero shape infants as they appear at birth and throughout infancy.

The prenatal environment can be adversely affected as well by psychological stressors. Such factors may adversely affect a range of mechanisms including stress hormones, causing altered fetal growth, development and permanent structural and functional changes termed “early life programming or imprinting and pathophysiology” in later life.

Here the focus is on maternal psychological stressors. The extent to which an individual responds adaptively versus maladaptively to psychological stressors depends on numerous variables.

Pregnancy is a period of psychological preparation for profound demands of parenting. Most women experience ambivalence, particularly (but not exclusively) if their pregnancy was unplanned.

If financial worries, physical illnesses, prior miscarriages or stillbirths, or other crisis interfere with their working through the ambivalence, the neonate may arrive as an *unwelcome* guest.

For adolescent mothers, the demand that they relinquish their own developmental agenda (e.g. the need for an active social life) may be especially burdensome.

Social support during pregnancy is also important. A supportive relationship predicts satisfaction in mothering. At the other extreme, conflict with or abandonment by the father during pregnancy may undermine the mother's ability to become absorbed with her infant.

Maternal stress affects through the production of *adrenal hormones*, also *influences the behavioral characteristic of the newborn*.

Some discussion as to how that maternal stress is harmful:

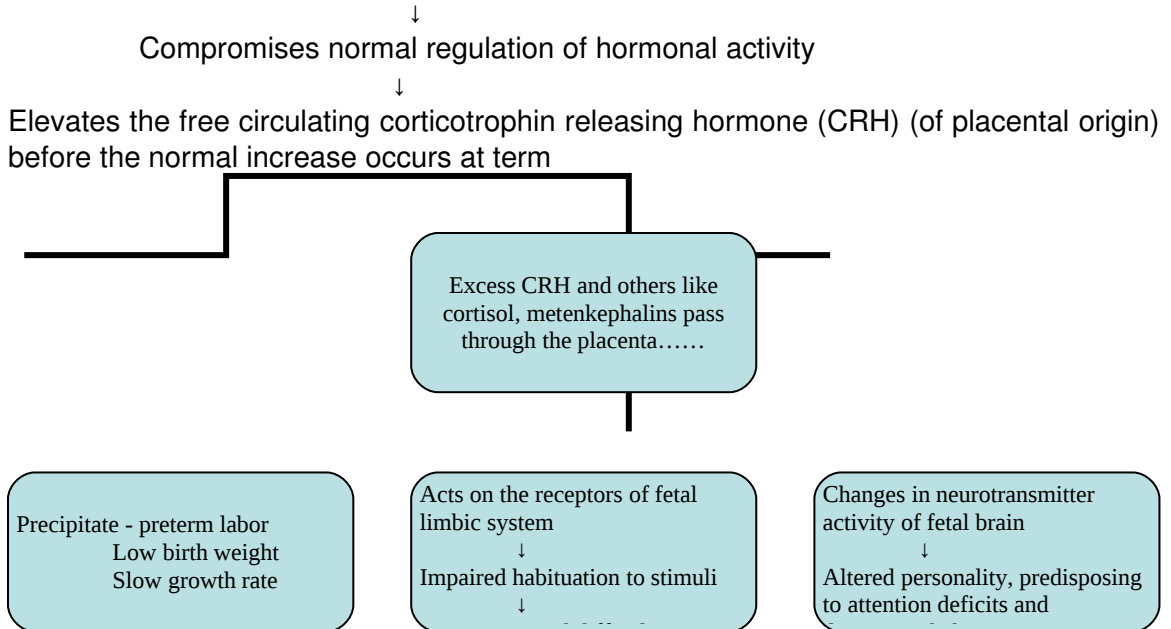
A) Rodents and non human prenatal studies have shown considerable data linking *prenatal stress and offspring's development and behavior*.

It reportedly results in:-

- spontaneous abortions
- delayed birth process
- compromised physical growth
- Increased incidence of malformations.

Recent studies in humans suggest that alternations in the activity of the neuroendocrine system mediate the effect of psychosocial stress on fetal development and pregnancy outcome.

B) Chronic maternal stress during pregnancy



In rats, gestational stress and excess maternal and fetal plasma corticosterone cause down regulation of fetal – glucocorticoid or mineral corticoid and impair the feedback mechanism of the HPA axis in infancy and adulthood. Also the increased CRH activity in amygdala, incidence of anxiogenic and depressive like behavior which is better by CRH antagonists.

C) The developmental origin, hypothesis suggests that pre and postnatal exposures may influence vulnerability to later diseases. The Hypothalamic- pituitary- adrenal axis(HPA) is one pathway by this occur.

Analysis were conducted in the BCG cohort to explore whether the postnatal exposures of childhood infections was related to HPA axis activity in adulthood.

FINDINGS

Negative associations were evident between a number of upper respiratory infections and adult cortisol. These remained after controlling for the other potential prenatal, postnatal, and adult determinants.

Conclusion

Childhood respiratory illnesses associated with reduced HPA activity in adulthood.

D) Study based on the Avon Longitudinal Study of Parents and Children (ALSPAC), a prospective community based study that has followed a cohort of women during pregnancy.

Self report measures of maternal anxieties, and depressions were assessed at repeated intervals in pregnancy and the post natal period.

Children's behavioral and emotional problems were assessed by parents report at age of 47 and 81 months. Information on obstetrical and psychosocial factors were obtained at several points in pregnancy and also the postnatal period.

RESULTS

Children whose mother's experienced high levels of anxiety in the late pregnancy exhibited higher rates of behavioral or emotional problems at 81 months of age, after controlling for obstetrical risks, psychosocial disadvantages and post natal anxiety and depression.

DISCUSSION

There is evidence that the antenatal stress or anxiety has a programming effect on the fetus which lasts at least unto middle childhood.

E) The lives of children of *Depressed Mothers* are profoundly affected by their mother's illness. Newborns of depressed mothers have been demonstrated:

- *To have a low apgar score*
- *Their possible IUGR and preterm delivery makes them vulnerable to perinatal respiratory and neurological abnormalities.*
- *In the perinatal period they are often less active than other newborns and appear to be less consolable when crying.*
- *After the perinatal period those babies are likely to have poor developmental scores and show features of failure to thrive.*
- *Are less likely to be breast fed and to imitative behavior.*
- *Have a higher incidence of Sudden infant death syndrome.*
- *In later childhood they appear to have a higher incidence of ADHD (particularly in boys) depression (particularly in girls) and to experience school and social difficulties.*

If the emotional state is persistent, though it will vary in intensity from time to time. It is this persistence of the glandular upsets that is responsible for the hazardous nature of maternal stress.

Because the conditions that give rise to maternal stress are more likely to persist than to change, the infant who was made hyperactive by maternal stress during the

prenatal period or who suffers some developmental irregularity must make the adjustments to postnatal life which even newborn infants who have been spared the effects of maternal stress find it difficult.

HOMOEOPATHIC PERSPECTIVE

The successful application of the law of similars depends entirely on the concept of individualization and susceptible constitutions. The concept of susceptible constitution is reflected in Hahnemann's *Theory of chronic disease* which takes into consideration the *hereditary influences and predispositions* that play an important role in the genesis of illness.

All of these as well as any disturbing influences during pregnancy, will affect the *sensitivity* of the unborn child. This briefly is the *beginning of Hahnemann's theory of the basis of diseases*. The practice by the Totality of symptoms (aphorism 7) but without the knowledge of the Miasm, Constitution of the patient (aphorism 5) has assessed only half of the information necessary for a diagnosis, a prognosis, an appropriate remedy and a clear management plan.

The information covered in "aphorism – 5" and "aphorism – 7"
"Cause and Effect" form a COMPLETE CASE.

We can see, prescribing for the birth process is 2 folds:

- The homoeopath will always prescribe acutely during delivery, avoiding complications for both mother and child.
- The other aspect is prescribing retrospectively if the patient was not treated homeopathically at the time of delivery.

Miasmatic theory should be considered the true genetic theory, since miasms are transmitted to children. It also provides something analogous to the genetic therapy, since the inherited miasms can be treated and the genetic transmission halted, protecting future generations.

If a woman is in better health during pregnancy, as often happens because of the exteriorization just described, Hahnemann suggests treating the symptoms manifest before the pregnancy, which ideally be treated before or at least during it.

In the *Chronic Diseases*, Hahnemann discusses the value of giving antipsoric medicines to the pregnant women:

The homoeopathic treatment is indispensable in order to destroy the psora, the producer of most Chronic diseases, which is given them hereditarily. Destroy it both within themselves and in the fetus, thereby protecting posterity in advance. Of the women who had this treatment Hahnemann said, "They have given birth to children usually healthier and stronger to the astonishment of everybody"

It is obvious that when the same miasm is strongly active in both parents, the result can be devastating for the newborn child; deformities, *mental aberrations or severely emotionally disturbed child could be the outcome*.

Since the underlying PSORA intensifies whatever other miasms are present, we see the increasing activity of the other miasms in our children, resulting in *cancer at an early age, learning problems like ADHD and disturbed emotional behavior*.

While in Hahnemann's time Psora was the dominant miasm, a great majority of patients have SYCOSIS in some form, with catarrh or mucus as the main expression. A

syphilitic mother experiences complications during labor or delayed and painful labor, resulting in complications for the newborn child.

The SYPHILITIC tendency to destruction is also seen in *early miscarriages, stillbirths and tendency to bleed during pregnancy*. Deeper syphilitic expressions are found in birth defects affecting the most precious organs (heart, brain, kidney) as well as causing deformities of the bones. Intra utero syphilitic babies are likely to be *in a malposition*. *Gestational diabetes* can be caused by when pregnancy triggers mother's syphilitic miasm.

The TUBERCULAR miasm, exhaustive labor, exhaustion continuing after labor, leaving patient unable to nurse. Children born from tubercular parents tend to have a narrow deformed chest, weakness of the respiratory system, leading to frequent coughs, cold, flu, and even asthma. They tend to be allergic to furry animals and consequently fear them.

PROBLEM RESOLUTION

As per the philosophy and adequate case taking the dynamics of the case been explored and the problem being defined, the resolution to be directed not only towards the presenting complaints but the child's constitutional state, which in turn includes *the prenatal stressors*, the influence of which is ingrained on the constitution.

Homoeopathic therapeutics afford unlimited possibilities of influencing favorably the vital faculty and mitigating the adverse influences of the hereditary predispositions to the illnesses, thereby leading to a better adaptation of the patient to his environment. It represents them the practice of constitutional medicine at its best.

This form of management of the fetus in the prenatal period via the health of the mother provides a form of prophylaxis for child care.