

## A NOTE ON TOXAEMIA IN PREGNANCY

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Perusal of a recent volume on this topic has suggested the description of our present professional confusion as a portentous flatulence of opinions arising from an undigested mess of hospital and laboratory reports. It may therefore be useful to collect some of the directive flotsam of fact from the historical current of this *opprobrium medicorum*.

## Circumstances of Civilized Women

The phenomena may be summarily ranged under the title of failure during pregnancy in civilized women of the mechanism of metabolism to bear the burden laid upon it. So far as our ignorance permits judgement, such failure is so rare in animals and "nature" peoples that the potent underlying factors cannot be deemed specific either to pregnancy or to human nature, and must be sought in the difference of the circumstances of civilized women. Despite the School of Salerno, civilization constrains the excretory functions, and custom dictates diet, drink, and dress. In pregnancy the question is posed whether the constitution inherited after precedent adaptations is so fitted to the present environment as to be worthy of transmission to another generation. Death is an answer in the absolute negative, and a difficult survival shows a borderland case. In this dilemma of imbalance between the inherited mechanism and its burden the prophylact may select either horn for his preventive effort, but the momentum of the more recent civilization is more easy to alter, and methods which lighten the metabolic load promise quicker results.

In hospital statistics tabulation of results in the order of pregnancy-numbers shows in the first part of the series rates decreasing from that of the primipara; an improvement like that of athletic or other records with a series of eliminating heats. In the latter part of the series increasing rates point to the entrance of a new factor, which may be an acquired weakening of the metabolic mechanism. It is possible that the hospital records have superposed two sets of superficially resemblant cases—one eclamptic, the other nephric.

## The Metabolic Overload

The most useful directive statistics are illustrated by two sets from Germany, relating to the case-frequency of eclampsia. The first shows that in East Prussia the incidence of eclampsia in townswomen is six times as heavy as that in women in the surrounding country. The second shows that under the conditions of severe restriction of food and other difficulties during the war the eclampsia case-rate in Baden was lowered one-third, and that it rose again on the return to less stringent life after the end of the war. In the actual production of eclampsia differences of nutrition and living are preponderant. The metabolic overload of civilization finds its most dramatic expressions in the hyperemesis and eclampsia of the pregnant; but, apart from pregnancy and excluding the immediate responses of acute vomiting and diarrhoea, the overload takes its toll of men and women alike. Crile has ascribed "the diseases of civilized man" and their increasing frequency to disorder at some link of the endocrine chain, and breaks the chain by denervation of the adrenals. Whether this will afford relief to women who break down in pregnancy is a question for future study.

There is evidence that the inherited metabolic mechanism behaves differently during pregnancy. It is tuned to "pregnancy pitch," but the search for exact knowledge of the change has been hampered hitherto by the attractions of the human problem and its special pathological phenomena. Thirty years ago (*British Medical Journal*, 1906, i, 1534) the general result was stated thus: "The processes both of ingestion and ex-

cretion, . . . though remaining well within physiological limits, exhibit a tendency to more leisurely or economical performance." In the nitrogenous exchange particularly a positive balance is more readily attained. The recent summary of Garry and Stiven is less emphatic, but it is clear that the defect in maternal diet is not grossly quantitative, and calorie value is not the essential measure of merit. The crude assertion that "the mother must eat for two" is not the intelligent woman's guide to nutrition.

It is true that the mother must nourish two, and in the symbiosis of mother and child, if there is a contest of needs, the embryo is dominant, its younger cells ensuring that its essentials are rigorously exacted even at the cost of the mother. In plenitude the child may add to its bare necessities a reserve of nutriment which has an important influence on its capacity for post-natal life, but should there be mineral deficiency the foetus will be served and maternal anaemic or osteomalacic conditions may occur.

At necropsy the terminal picture, though dominated by acute focal necrosis in the liver, shows congruent features in the rest of the body. Acute focal necrosis is not a specifically human but an animal event, and in its various types, when the aetiology is definite, it is linked to some form of poisoning, either primary or secondary. While with poisons like phosphorus fatty necrosis is typical, colliquative forms are frequent, and differences of local distribution round the central vein or about the portal space are recognized. It may be that a difference in the route by which the noxa arrives at the liver is indicated. In relation to pregnancy, association of the central type with hyperemesis and of the portal type with eclampsia is usual. These associations have depressed somewhat the medical outlook, and it must not be forgotten that even with delirium and jaundice and the full clinical picture of icterus gravis the process may be arrested and recovery occur.

The fluid store of the body has to be increased in pregnancy; and in toxæmias, especially of the hyperemesis or hypersalivation types, a stage of acute dehydration may occur, and since the concentration of a noxa sometimes intensifies its action the persistent treatment of toxæmias by infusion is justified, and at times the clinical gain is astounding. Notwithstanding, pregnant women should not be burdened by a routine prescription of excessive water-drinking.

Except for the interruption of pregnancy in hyperemesis, the surgical era in obstetrics has apparently yielded no betterment in the case mortality of toxæmia. In anuria, decapsulation of the kidney has sometimes seemed to give a starting-point for recovery.

## Need for Integration and Sifting

In the treatment of the individual case of eclampsia the methods which, in long series, have given the best results are those, such as Stroganoff's, based on the nerve sedatives. For the arrest of a case in an early stage of progress to eclampsia, systems such as an exclusive milk regimen show frequent but not universal success.

In 1930 Whitridge Williams said (*Obstetrics*, sixth edition, p. 668):

"It is evident that the cause of eclampsia has not been discovered, and that the peace of mind of all concerned would have been increased had many of the so-called contributors never written, or at least withheld their contributions sufficiently long to submit them to ordinary self-criticism."

A statistical advisory committee might be useful, but an attempt at the integration of the demonstrated facts is overdue, and a ruthless criticism and scrapping of the irrelevant is necessary to clear the ground.

A league against deafness has been founded at Nice with Professor Portmann of Bordeaux as president of honour and Dr. Robert Morch as president. Further information can be obtained from the Secretariat de la Ligue contre la Surdit , Palais Doria, 143, Promenade des Anglais, Nice.