

CONCERNING ONE HUNDRED AND FIFTY CASES OF ECLAMPSIA IN THE LYING-IN HOSPITAL OF NEW YORK.

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First Paper.

The present discussion of the toxæmic syndrome of pregnancy expressed in eclampsia merits some closer attention to the actual clinical records of this condition.

It is the desire of the writer to present a few facts and figures based on a long line of consecutive cases.

Of particular interest are the following points:

(1.) The influence of season on the occurrence of eclampsia; (2.) the frequency with regard to the ante-, intra- and post-partum state; (3.) the mortality with regard to the time elapsing between the first convulsion and the emptying of the uterus.

The series comprises all those cases of convulsion occurring before, during and after the child-bearing act in the ward-service, during the eleven years from 1895 to 1905, inclusive.

The maternal mortality during the ten years, is thirty-six per cent. of all cases; the fetal mortality in ante- and intra-partum cases is forty-seven per cent. The diagnosis *eclampsia* is made only with the verified history previous to admission or the clinical observance of typical convulsive seizures.

While many of these cases occurred in the routine confinements in the wards, the majority were referred to the hospital, either having had convulsions or being in the pre-eclamptic state. Naturally this gives a series of the more severe cases, and greatly raises the number of eclamptics per thousand normal deliveries,

though the other ratios remain the same.

Climatic conditions, particularly seasons of unsettled weather, have always been supposed to have an effect upon the occurrence of eclampsia. In the cases under discussion this is shown in a very graphic manner, the curve of occurrence in a general way following the curve of rainfall for the various months.

By charting the cases occurring among our confinements during the last ten years, it is of interest to note the rise through March, attaining its highest level in April, and slowly declining to its lowest in November, which, though not by any means the month of most equable climate, is one of very low rainfall.



*CHART I.—Frequency of occurrence of eclampsia with relation to season illustrated by the number of cases per 100 normal deliveries in the wards of the Lying-in Hospital.

In April, 3,817 cases per hundred deliveries suf-

ferred from eclampsia, which is thirteen and one-third per cent. of the entire series, and in November, 1.153 cases per hundred, which is four per cent. of the series. Between these two months a more or less regular gradation of cases per hundred may be traced. (See table 1.)

Concerning the frequency of eclampsia in the ante-, intra- and post-partum states, eighty-one of the list, or fifty-four per cent., occurred before labor began, and these were the most serious cases regarding prognosis, having a mortality of forty-five per cent. The post-partum cases are next in frequency, occurring forty-five times or thirty per cent., with the lowest mortality twenty-five per cent.

Intra-partum cases are the least frequent, occurring but twenty-four times, or sixteen per cent., with a mortality of twenty-nine per cent. (See table No. 1.)

In the intra-partum cases, where the prognosis is best, the convulsions usually begin during the second stage, when the head is nearing the outlet, and in the majority of cases cease on the birth of the child.

It is very evident in all cases that the mortality improves the shorter the time that elapses between the first convulsion and the emptying of the uterus. Out of seventy cases noted, thirty deaths occurred with an average delivery of 11.2 hours after the first convulsion; while forty recoveries took place with an average delivery 7.3 hours after the first convulsion.

In 106 ante- and intra-partum cases of eclampsia, accouchement force was performed ninety-six times, and abdominal Cæsarean section twice. Of these sixty-nine per cent. had no further convulsions after delivery.

Concerning the significance of pulse tension in prognosis: in seventy-seven cases, with pulse tension noted, the mortality of the high tension cases was thirty per cent., while the mortality of the low tension cases was sixty-two per cent.—twice as great as the former.

Little will be said of the various forms of treatment in this paper except to note that two years ago for a period of a few months, the mortality ran up to sixty-one per cent., and that during this time, in addition to other treatment, hot packs, croton oil and intravenous saline infusions were used indiscriminately

on all the eclampsias admitted.

The amount of saline solution introduced into the veins was always great, 1000 to 1500 c. c., and in all of these fatal cases pulmonary œdema followed. It is only fair to state that, eliminating the thirty-one cases thus treated, the mortality of the remaining 119 cases is reduced to twenty-five per cent.

The greater frequency in primiparæ is shown in table No. 2. It will be seen that the ratio of occurrence between primipara and multipara is about five to three, the prognosis being a little better in the primipara. Eclampsia occurs in one out of every ten cases of twins or multiple births, but with a low mortality, twenty per cent., only two deaths occurring in the eclamptics bearing multiple products of conception.

The average length of time in the hospital of this series is eighteen days. The average age is twenty-four years, with the youngest aged sixteen and the oldest forty-eight years.

Convulsions most frequently occur during the ninth lunar month of gestation, occurring as early as the fifth month in four instances and in the fourth month in one instance. One patient, without epileptic history, had convulsions once a month throughout pregnancy, increasing in severity until she was successfully delivered in the ninth month of a living child. This patient also had the other ear-marks of toxæmia, including headaches, œdema and vomiting.

Clinically the hemorrhagic tendency, which has been observed in the more severe cases, usually associated with jaundice, was present in but three cases, showing how rare is this condition. Two of these died; in one a coffee-ground vomit was noted, and in the other, sub-mucous hemorrhages. The third, with profuse bleeding from the gums for two weeks previous to labor, recovered.

Resume: (1.) Eclamptic seizures in the pregnant woman occur most frequently in April, and least frequently in November, with a regular descending curve of frequency between these two months.

(2.) More than half the cases occur before labor begins, and the mortality is highest in these cases.

(3.) The shorter the time that elapses between the first convulsions in ante- and intra-partum cases and delivery, the better the prognosis for both mother

and child.

(4.) The maternal mortality in cases of eclampsia with twins, or multiple births, is lower than in all other cases.

TABLE No. 1.

	Total.	Primiparae.	Multiparae.	Plural Births
Confinements.....	6286	3206	3080	92
Eclampsia.....	150	95	55	10
Frequency.....	1:42	1:34	1:55	1:9
Per 100 Cases.....	2.39	2.92	1.80	10.86
Deaths.....	54	33	21	2
Mortality per cent..	36	34	38	20

TABLE No. 2.

	Antepartum.	Intrapartum.	Postpartum.	Totals.
Number of Cases.....	81	24	45	150
Distribution.....	54%	16%	30%	100%
Deaths.....	36	7	11	54
Mortality per cent...	45	29	25	99