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SYPHILIS IN RELATION TO DEAD-BIRTH AND INFANT MORTALITY.

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Syphilis, in women, presents a peculiarly sad aspect of the disease, for not only do they suffer themselves, but can transmit the disease to their unborn children; syphilis, thus transmitted, kills many infants before they are born, and those that survive birth either die in early infancy or grow up into diseased and degenerate members of the community. I know of no subject which, both in its medical and social aspects, is more worthy the close attention of midwives and nurses than that which forms the title of this paper. Let us first examine the extent to which syphilis causes dead-birth and infant mortality, commencing with dead-birth.

TOTAL DEAD-BIRTH RATE.

The Notification of Births Act came into force, in certain areas, in 1907; it has taught us that the dead-birth rate, from all causes, is approximately 3 per cent.; in other words, out of every 100 infants born, three are born dead. When an infant is born dead, the doctor or midwife has to fill in a certificate of "stillbirth"; this certificate merely certifies the infant was born dead : it is not concerned with a statement, or a hazard, as to the cause of death. In fact, such a statement would be extremely difficult to make with any degree of accuracy; in the majority of cases it would involve a detailed *post mortem* examination of the infant, an investigation of the placenta, and a thorough inquiry into the state of health There is no legislative of the mother. machinery for doing this at present. So, although we are enabled to estimate the number of infants born dead, we have no national statistical figures to tell us the relative frequency of the causes (including syphilis) of dead-birth.

NUMBER OF DEAD BIRTHS DUE TO SYPHILIS.

The Medical Officer to the Local Government Board, in his report for 1913-1914, states that, from evidence published by the Royal Commission on Venereal Diseases, it appears likely that one-half of this antenatal mortality (a dead-birth rate of 3 per cent.) is due to syphilis; in other words, he suggests that 50 per cent. of dead births are due to syphilis. This appaling figure must be considered far too high. As I have already pointed out, the only way to arrive at accurate figures is to subject every dead-born foctus to a complicated *post mortem*

examination, and to investigate the state of health of the mother, and this, on a large scale, is impossible, except in maternity hospitals equipped with a complete pathological department. We have, luckily, the results of such an investigation, conducted by Dr. Whitridge Williams in the Obstetrical Department of the John Hopkins Hospital. Dr. Williams studied 705 fœtal deaths which occurred in 10,000 consecutive deliveries. In this series he included all deaths occurring in children from between the seventh month of pregnancy, the so-called period of viability, and full term, as well as those occurring within the first two weeks after delivery. (Out of these 10,000 mothers, 4,600 were black.) The result of this investigation is seen in Table I.

TABLE I. Causation of 705 Foetal Deaths.

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Cause.	Total.	Percentage Incidence.
I. Syphilis	186 127 124 79 50 46 24 23 22 13 6	26.4 18 17.6 11.2 7.1 6.5 3.4 3.3 3.1 1.8
12. Debility	5	0.9 0.7
	705	100.0

The most striking feature of this investigation is that syphilis is far and away the commonest factor concerned in the production of death, presenting an incidence of 26.4 per cent. It was observed much more frequently in the blacks than in the whites, being 35 per cent. in the blacks and 14 per cent. in the whites. So you see that where each dead fœtus is examined for the cause of death, the incidence of syphilis works out at 26.5 per cent., or about half the figure suggested by the evidence of the recent Royal Commission. Remember, too, that this figure belongs to one particular city, and that about half the fœtuses were from negro parents, amongst whom syphilis is particularly common.

INFANT MORTALITY DUE TO SYPHILIS.

Let us now leave, for a moment, the subject of dead-birth, and pass on to consider the extent to which syphilis is responsible for infant mortality. We now have more reliable figures,



