

## SYPHILIS IN RELATION TO DEAD-BIRTH AND INFANT MORTALITY.

### THE EFFECT OF SYPHILIS ON THE FŒTUS.

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If a syphilitic woman becomes pregnant, the effect of the disease on the foetus is either:—

1. The death of the foetus in the uterus at about the seventh month, and the birth of a macerated syphilitic foetus.

2. The birth of a living infant, at a near full-term, presenting all the signs of congenital syphilis.

3. The birth at full term of an apparently healthy infant, who develops congenital syphilis in a few weeks or later in life.

Why does the effect of syphilis in the infant present these variations? There is more than one reason, but the chief of them is the relation the date of infection of the mother bears to the time of conception. As regards this point, we may recognise three groups of cases:—

1. Pregnancy may occur in a woman who is already syphilitic.

2. Syphilis may be acquired at the same time as conception occurs.

3. Syphilis may be acquired some time during pregnancy, in the early or the late months.

If a woman is infected with syphilis at the time she conceives, the result is almost invariably the birth of a macerated syphilitic foetus, unless, of course, she is treated. The same is true for a woman who acquires syphilis in the early months of pregnancy. If a woman conceives at an interval after she has become infected, the effect on the foetus varies with the intensity of her disease; if the interval between infection and pregnancy is a long one, and the disease is in a mild stage, she either gives birth to a macerated foetus or to an apparently healthy infant who later shows signs of the disease. If the interval is a short one, or the disease is still in a very active stage, she gives birth to a macerated foetus. But there is no rule, and it is not easy to say why one woman will give birth to a macerated foetus, and another, in apparently the same stage of the disease, will give birth to a full-time infant, who only develops the disease after an interval.

Syphilis is far the commonest cause of death of the foetus in the uterus and the birth of a macerated foetus. About 50 per cent. of all macerated foetuses are syphilitic. The other chief causes are albuminuria of pregnancy and Bright's disease. It is impossible by examining the external appearance of a macerated foetus

to say whether its death has been due to syphilis or not. On careful post-mortem examination its organs reveal changes which the expert eye may recognize as syphilitic. The most characteristic of these is a change at the ends of the long bones, at the junction of the bony shaft and the cartilage. This junction is normally represented by a straight line; in syphilis the line is thick and irregular. The other two chief things to be noticed are that the liver and spleen, especially the spleen, are considerably enlarged.

The only real test is to examine the organs microscopically, especially the liver and spleen, for the *spirochaeta pallida*. When these are found the diagnosis of syphilis is, of course, certain.

A peculiarly sad effect of syphilis is the repeated birth of macerated foetuses. This is known as "habitual death of the foetus," and I have known it repeated in as many as seven consecutive pregnancies. I do not want you to think that all cases of "habitual death of the foetus" are syphilitic, but by far the majority of them are. A characteristic thing is often noticed in these cases, which shows that the disease may gradually die out: we often meet with women who give birth to one or more syphilitic macerated foetuses, then to a living infant with signs of the disease, and finally to an apparently healthy infant.

Another way we are told we can recognise syphilis is by the examination of the placenta. The placenta is said to be heavier than normal in proportion to the weight of the foetus. Normally the placenta weighs about one-sixth of the weight of the foetus, whereas in syphilis it is said to weigh as much as one-fourth or even one-third. I have not found this increased weight of the placenta at all constant; in fact, I have found that as a rule the placenta is very little increased in weight. On microscopical examination of the placenta, more characteristic changes are often found. But, in my opinion, it is impossible to say that the case is one of syphilis or not, from the examination of the placenta.

### MODE OF TRANSMISSION OF SYPHILIS TO THE FŒTUS.

Our views about the way the germ of syphilis is transmitted to the foetus have undergone considerable change of late years. At one time it was thought that the ovum of the mother could be directly infected by the spermatozoon of the father. This theory supposed that the ovum, and hence the foetus only, was infected, and that the mother often escaped infection entirely. This theory received support from the often noticed fact that a woman, who seemed

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