

two weeks every infant born alive would have perished.

Why do I quote these appalling figures? It is because I believe that no inconsiderable part of this high infantile mortality arises from the passing of premature, immature, and defective infants—little human bankrupts—within three months or so of their starting on the difficult and risky business of life.

PREMATURE INFANTS.

In the present Lecture I desire to focus your attention on the *premature infant*.

It is impossible here to describe the wonderful process of *maturing*, whereby from the lowly cell there develops within the relatively short space of nine months the most beautiful, perfect, and valuable of created forms—the human babe. But, in order to be able to recognise shortcomings and defects it is well that the intelligent nurse should understand something of the more important developmental changes which occur during the latter part of pre-natal life. The normal duration of pregnancy is 40 weeks, or 280 days. If a baby is born before the completion of this natural period of intra-uterine life it must be counted a premature infant.

Although there are cases on record in which a developing child born at or even before the sixth month of pregnancy has been reared, it is safe to say that an infant born before the 196th day or 28th week, or seventh lunar month, has practically no chance of surviving.

THE CAUSATION OF PREMATURE INFANTS.

When we attempt to discover the cause or causes of premature birth we are confronted with almost insuperable difficulties. The factors which may be at work are many, and often in one case several causes combine. The factors instrumental in producing prematurity may be divided into—

1. Causes arising in connection with the mother.

2. Causes dependent on the condition of the unborn child.

Generally speaking, the factors belonging to the latter class are always of the nature of actual disease. Frequently also the maternal causes are more or less irremovable. But there is no doubt that no inconsiderable proportion of premature births are due to the action of preventible causes.

It is not for us to enter into a discussion of these influences. The study may well be left to the obstetric physician. I merely refer to this aspect of my subject here to point out the urgent need for a more systematic and scientific care and control of the pregnant mother. It is well in all matters to begin at

the beginning. And in regard to the Protection and Preservation of Infant life, it is well to commence as long before birth as possible. There is no doubt that in the future we shall have scientifically directed institutions for the study and care of pre-natal conditions, just as in this hospital we deal with the earliest stages of post-natal life.

PREMATURITY FROM INDUCED LABOUR.

As you well know in some instances in the best interests of the mother it is necessary to bring on labour before the completion of the full time of the pregnancy. In many of these cases the infant, although as regards time-limit it must be considered premature, is nevertheless relatively vigorous, and with care may survive and do well.

[An illustrative case recently in the hospital was here referred to.]

CHARACTERISTICS OF THE PREMATURE INFANT.

Let me say at once that it is not always easy to say definitely and at once from mere inspection whether a child is premature or not.

As I have already indicated, the conditions influencing the growth of the child during intra-uterine life are many and varied.

Many of the cases of "weaklings" and "wasters" brought to this hospital seeking admission, usually after all kinds of irrational and prejudicial experiments have been attempted, are found to have been prematurely born.

The treatment of premature infants, and especially of neglected and ill-managed premature babies, is, I am bound to admit, far from encouraging.

Even if initial difficulties are surmounted and the child is apparently thriving, some minor ailment or comparatively slight illness or accident, will in a few days undo the labour of weeks. These cases have a feeble hold on life, possess but little reserve force, succumb readily to prejudicial influences, and even when steered through the perils of infancy and childhood, rarely attain to a maturity which can be considered vigorous and stable.

Of course, the biographies of some notable men and women seem to show that there are exceptions, but certainly such exceptions go far to prove the rule.

It, therefore, becomes of great importance to recognise at once what are to be considered and dealt with as premature infants.

Let me detail some of the more important points which should guide us to such recognition:—

Weight and Length.—As you well know in this hospital we lay great stress on weight and length. These are carefully taken in every

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