the broad ligaments; (3) that once the peritoneum becomes infected near or from the uterus, the infection can spread not only to the rest of the genital organs, but also to the peritoneum covering the intestines, stomach, etc., up to the under surface of the diaphragm.

Other points in the anatomy of the genital canal will be referred to later, but the question now is what constitutes puerperal fever. It is simply *wound fever*, or, in other words, infection of a raw surface arising during, or from interference with, the course of labour by micro-organisms implanted thereon at the time of labour or during the puerperium.

The wound exists after every labour at the placental site. This is the area, situated usually at the top or fundus of the uterus, to which the placenta or after-birth is attached during pregnancy, and from which it separates when the child has been born. Inasmuch as the function of the placenta is to effect an exchange between the blood of the fœtus and that of the mother, it follows that it must itself be well supplied with maternal blood. When it separates, therefore, the mouths of large veins in the uterus are left gaping. If all goes well, these are closed by the muscular contraction of the uterus, which takes place immediately after the delivery of the child, but even then they are not completely sealed up until a few days later. This placental site, then, constitutes what we will call the natural wound. In all first labours there is in addition a slight laceration of the perineal orifice caused by the passage of the head of the child through the tightly stretched vulva. This is a wound also, and its occurrence is quite natural, but it is not of such great importance in connection with puerperal fever as the placental site.

But we must have not only a wound but micro-organisms also. Where do these come from? These also are present in the genital canal in every healthy woman at the time of delivery.

If cultures are taken from the different parts of the genital canal just before and also just after delivery in women whose confinements take place *without any interference whatever*, two kinds of germs are found to be almost invariably present. With one group of these we need not concern ourselves, as they in all probability play no part in the causation of puerperal fever, but the others are of considerable importance, and are known as streptococci.

Going more into detail, we find that these are in health confined to the vagina itself, while the uterine cavity is always sterile and contains no germs whatsoever. The curious thing about these streptococci, however, is that they are harmless in the vagina; in fact, they are distinctly useful.

This was shown by some German observers who introduced into the vaginae of a large number of women various other organisms, and they found that they took a certain time to disappear. In another series of experiments they first freed the vagina from all organisms by douching it with various solutions, and they then found that the introduced organisms took much longer to be eliminated. The function of the normal vaginal organisms is, therefore, to rid the vagina from any others that may be introduced, and their presence tends directly to prevent puerperal infection. That their elimination is not merely a mechanical process was shown by the fact that when particles of vermilion were introduced instead of organisms, there was no difference in the time taken for these to disappear from the douched and the undouched vaginae respectively.

Furthermore, they found that the streptococci did no harm to animals into whom they were introduced, and also that they grew very feebly on the ordinary culture media in the laboratory.

In other words, these streptococci in the healthy vagina are not parasitic, as it is called. There is no reaction of any kind between the healthy woman and the germs.

The reason for this is that the secretion of the healthy vagina is acid, and streptococci cannot grow well in an acid medium. If for any reason the secretion becomes alkaline, a reaction at once occurs, the organisms grow freely, and the patient suffers from streptococcal poisoning.

Now, the contents of the uterus in health are faintly alkaline. Consequently, if by any means these vaginal cocci get into the uterus, they grow, and poisonous products are formed which are readily absorbed into the maternal circulation through the partially closed vessels at the placental site.

In addition to these organisms, the surface of the vulva is always in health covered with some other germs derived from the rectal orifice, which are known as Bacilli Coli Communes, but they exist only on the surface, and do not, under normal circumstances, get even into the vagina, much less into the uterus. If they do reach the interior of the genital canal, they may grow and multiply and produce poisons, just as the streptococci do.

We see then that, where no interference takes place at the time of delivery, there is no reason why the streptococci should get into the uterus, nor the B. Coli into the vagina. Consequently, there is no reason why puerperal

previous page next page