

garded as the essential characteristic of puerperal fever. Even the existence of thrombosis is not as a matter of course to be attributed to puerperal fever, as in many cases this remains entirely isolated, as contrasted with the thrombo-phlebitis which accompanies or follows the diphtheritic process.

Limiting in this way the conception of puerperal fever, the question naturally arises—What are we to understand by the "diphtheritic process"? You are aware that recent investigations have thrown most important light on the nature of diphtheria affecting other organs—especially the pharynx, where it has been shown to consist of a fungous formation, the spores of which are seen under the microscope to penetrate not only into the tissues, but within the bloodvessels—producing in this way a generalised disease. In diphtheria of the genital organs investigations have as yet not been extended thus far, and it remains a question calling for farther examination. Admitting, however, that the diphtheria is here due to a fungous formation, other questions arise. Is the fungus in question specifically different?—since we are familiar with various fungi which germinate in the vagina of both pregnant and non-pregnant women without giving rise to any dangerous affections;—is the fungus the mere carrier of the contagium? or is the puerperal fever produced in consequence of the special condition of lying-in women favoring the production of certain fungi, by reason of changes taking place in the organic substances and fluids?

Leaving these considerations, we may next advert to an examination of what the microscopico-anatomical basis of puerperal fever is. In the majority of cases we find on the external genitals and the vagina a diphtheritic deposit covering those wounded spots which, in the form of larger or smaller lacerations of the mucous membrane, so frequently occur during labor. The circumference of these spots is more or less considerably swollen. In many cases the diphtheritic deposit is thus confined to the external genitals, and the disease pursues its course by casting off the deposit without any or with very little general disturbance. But in the majority of cases coming under Medical recognition, the diphtheritis is not confined to the entrance of the vagina, but is found deep within the canal, covering the large or small lacerations of the os uteri, and within the cavity of the uterus itself. Here it occupies both the site of the placenta and the upper paries of the organ; and it is sometimes found exclusively here, and in no places accessible to the eye.

It may be objected that in many autopsies of women dying of puerperal fever no diphtheritic deposit has been found. This is a fact which I have myself verified in several instances, in which not only have the symptoms been present, but careful examination of the patient during life has shown the presence of the deposit. In explanation of this apparent contradiction, we must not forget that the diphtheritic deposit in many cases very quickly disappears, and especially when injections or caustics have been employed, while its consequences may persist and undergo farther development. That we

should not be able during life to see the diphtheritic deposit when within the uterus is conceivable enough, but the diphtheritic flocculi may be recognised in their expulsion with the returning uterine injections.

As a general rule, the diphtheritic process spreads rapidly from the genital organs, but it does so only rarely towards the skin of the thigh, nates, etc. These then exhibit an erythema (which has been well named puerperal scarlatina) or pass into ulceration. More frequently the diphtheria extends into the urethra or the rectum, if it have not already appeared there primarily; but its most common modes of spreading are either by means of the connective tissue surrounding the vagina and neck of the uterus, by the mucous membrane of the tubes to the peritoneum, or by the lymphatics and veins—these various modes of its extension being often combined with each other.

1. In the first of these modes, there is an infiltration of the pelvic cellular tissue, with a turbid serosity which extends to the peritoneal covering of the pelvic genital organs as far as the ovaries, there being usually also peritoneal effusion. This infiltration of the pelvic tissue may extend to the retro-peritoneal space, the kidneys, and the liver, and indeed even to the pleura and lungs; and after it has persisted for some time, it frequently gives rise to abscesses of the pelvic cellular tissue. By many authors this turbid-serous infiltration of the connective tissue is regarded as a primary occurrence, and a perivaginal or periuterine phlegmon is then represented to be the essential condition of the puerperal fever. This view I cannot accept, as it does not accord with the results I have obtained from observing cases from the first, since I have constantly seen traces of diphtheria preceding the turbid-serous infiltration. It is true that tumefactions in the vicinity of the cervix uteri may be present soon after birth, from other causes—as, *e.g.*, from contusion and effusion of blood into the connective tissue surrounding the cervix—and such swellings may also issue in abscesses. But we must distinguish these from those which are dependent upon the turbid-serous infiltration consequent on diphtheria, although in many cases the two conditions may be combined.

2. Another mode of spreading the diphtheritic process, which can scarcely be said to be of frequent occurrence, is along the mucous membrane of the internal genital organs to the peritoneum. In the cases of this kind which have fallen under my notice, I have often at the autopsies been able to follow the course of this usually rapid disease. In such cases, in which there was no other visible mode of propagation, the inner surface of the uterus was covered with a bloody-purulent matter, and the tubes (some times only one of these) were reddened, especially along their external third, dilated, and filled with a purulent mass, their fimbriae being unusually swollen and reddened, and covered with or imbedded in fibro-purulent exudations. In these cases, usually a sudden attack of the pain peculiar to peritonitis (sometimes at first confined to one inguinal region) occurred on the second or third day after delivery.

3. The third mode of extension operates through