

A hæmatosalpinx was found on the right side, and beneath it a membranous sac adherent to the pelvis, containing a *fœtus* with the bones well preserved. After tying this off, another almost exactly similar sac was found on the left side. No definite placenta was found. The recovery was unusually smooth throughout, the temperature remaining below 100° excepting a temporary rise due to a stitch abscess.

ECTOPIC PREGNANCY.

MARTIN (*Berliner klinische Wochenschrift*, 1893, No. 24) concludes his series of articles on ectopic pregnancy with a list of 41 cases of pure extra-uterine gestations divided into three groups.

In the first group of 14 cases, the ovum, more or less intact externally, lay in the ovisac. No blood had entered the abdominal cavity, but the ovum was in varying stages of neceration and resorption.

The second group includes 9 cases of rupture. 16 cases of abortion constitute the third group. In 2 cases both abortion and rupture obtained.

A. In the 14 cases of the first group, the duration of pregnancy was as follows: In first month, 6; second month, 3; third month, 2; fourth month, 2; eighth month, 1. The pregnancy in each case was interrupted through hemorrhage into the fetal sac. The tube was intact; its external orifice open, and it contained no trace of blood.

In the 6 cases of one month and the 3 of two months, no coherent part of an ovum and no trace of a *fœtus* were present.

In the 2 cases at three months, in 1 the *fœtus* was found in the amniotic cavity. The same condition was found in 1 at four months and in the eight months case. In some cases the uterus, chorion, and amnion were separated by intruding clots, the intra-uterine ovum being involved. In others the ovum was wholly destroyed by blood and only the chorion tufts were left. In only 3 women were *fœtuses* found. If the ovum escapes into the abdominal cavity early, it is absorbed; later, it undergoes degenerative changes, and as such may be met with surrounded by, or mixed with, bloody detritus. What ultimately results from these ova is hard to say.

The 6 cases of one month and 3 of two months seemed to be on the way to safe restoration. The sac contents showed ovular fragments interspersed with coagula.

B. The 9 cases of rupture. It is striking that in 4 the ovum had isthmic insertion where the ampulla passes into the isthmus. In 4 the tubal end was inserted into one ovarian cavity, and the blood had no outlet save by rupture. In the others there seemed no hindrance to the escape of the blood by the physiological way. Three times the fimbriated end was agglutinated, four times the end of the ovary formed a firm mass, twice an ampullar hæmatoma; in 1, profound muscular atrophy at the point of insertion, and between the scanty muscle fibres lay great blood spaces. In 1 there was hernia of the tubal mucous membrane; in 4 the tube-walls showed traces of chronic salpingitis, the rupture occurring at the placental site. In 1 case the abdominal end was sharply bent, and ruptured immediately at the ovular insertion, so that the blood could not escape, and this had led to complete occlusion of the lumen of the tube. It appears, then, that in all cases of rupture peculiar difficulties existed which precluded the physiological way,

and in all cases rupture is the result of peculiar complications of the ectopic ovular insertion.

C. Regarding the cases of so-called tubal abortion the author says: In this third group it is worthy of note, that of 16 cases fourteen insertions of the ovum were in the ampullar part of the tube. The swelling thus occasioned lessened or prevented the escape of the blood by the abdominal mouth of the tube. In one case the tube was wrapped around an ovarian cystoma, both having grown together into a so-called ovarian tumor. In the other the whole tubal mass was greatly developed intra-ligamentously, and through peritoneal thickening the tube was shrunk peripherally from the ovarian insertion. Nevertheless the blood had forced its way through the narrowed channel and distended the abdominal mouth of the tube until it gave way laterally. It is also significant that of these 16 cases, in 9 the pregnancy had advanced to two months; in 4 only abortion took place in the first month; in 1 at three months, and in 2 during the fourth. The ampulla and isthmus are capable of retaining the ovum up to this point of size, but the wall becomes as thin as paper. The muscular elements suffer most; hemorrhagic foci separate them and the individual muscle-cells become cloudy or atrophied. The mucous layer, on the contrary, is little the worse; its longitudinal folds unite stellar-like before and behind the insertion of the ovum. As to the mechanism of the abortion, a self-originated contraction of the tube is improbable; in fact, its muscular elements are incapable of it. According to his observations, the author thinks the expulsion of the ovum is due to hemorrhage which occurs at the point of ovular insertion, arising either from incongruence between the ovum and its point of support, or from traumatic lesions. The bleeding may intermit or remit, or become massive, sweeping all before it. It follows the normal channel unless this be occluded, when rupture occurs.

SYMPHYSIOTOMY.

LEWERS (*Lancet*, London, 1893, No. 3649) reports a case of symphysiotomy done on a II-para. The external measurements were: between spines, 8½ inches; iliac crests, 10½ inches; external conjugate, 6½ inches. One normal labor had previously taken place, but the child was very small—indeed, was supposed to be premature. Section of the pelvic joint was attempted by the aid of a probe-pointed bistoury, but it proving insufficient on account of ossification of the joint, an Adams saw was successfully used. The joint separated 5 centimetres, and the child was safely delivered by means of the forceps. After some complications the patient made a good recovery.

THE DIAGNOSIS OF PREGNANCY.

LAWSON TAIT (*Provincial Medical Journal*, 1893, No. 140), in a clinical lecture, points out the great difficulties experienced in obtaining truthful and correct histories from illegitimately pregnant women, and the great caution to be exercised by the obstetrician examining such patients. Several interesting cases are reported from his great experience, in which he himself and others have had but narrow escapes from grave errors in diagnosis through the untruthful histories given by patients. In closing, he recommends the

greatest care to be exercised, particularly in regard to the manner of asking questions as to the absence of menstruation. A question should be put in as casual a manner as possible as to when the last period took place; if within a month, exercise the utmost caution to prove that the case cannot be one of pregnancy. The great probability is that it is not one; but the patient may be untruthful, and even regularly recurring menstruation is not incompatible with pregnancy. If the answer given is to the effect that the last period was some months previous to the date of examination, and if the abdominal tumor is of a size which would be that of a pregnant uterus of corresponding date, the chances are infinitely in favor of pregnancy. It should also be ascertained whether menstruation was regular previous to its cessation, and if the ceasing was an abrupt one. If the latter, and the previous menstruations have been regular, the certainty of the diagnosis of pregnancy is complete. If the previous menstruations have been irregular and the cessation not sudden, the history altogether fails, and may be entirely neglected. It should be borne in mind that the adolescent anæmia of young girls suspends their menstrual show almost invariably, but it does not necessarily interfere with their productive capacity.

THE SECRETION OF HUMAN MILK.

BASCH (*Archiv für Gynäkologie*, Band xlv., Heft 1, p. 15) gives in a most instructive and interesting paper the results of his investigations concerning the secretion of milk in the human female. According to various observers, traces of milk glands may be observed in a fetus four centimetres long. These consist of a whitish spot one-half millimetre broad, minutely elevated, due to a heaping together of the cells of the Malpighian stratum. Later this becomes more marked and the spindle cells of the corium are heeded in a cellular stroma. A number of flask or cupped processes extend from the Malpighian stratum up into the cutis, and later become ducts. Gradually a wall forms around the central swelling, separated from it by a groove or depression. This wall in man remains small, while the central papilla grows and ultimately takes its permanent form. In the ruminants (as the cow) the outer wall grows, while the papilla remains within until it forms a tube or blind sac with the papilla at its bottom where the milk ducts open. In the marsupials (as the kangaroo) there is at the bottom of this sac or tube a small projecting nipple, so that in these animals we may find, as it were, the point of union of two systems of development, one leading to the human nipple, the other to the udder of the cow. After birth the degree of the development of the nipple seems to be parallel with the longitudinal growth of the child—the longer the child, the more the nipple is developed. In the formation of the nipple, both the gland foundation and the cutis take a part. Its construction represents a histo-biologic process which is the resultant of many components, of which one is active, one passive. The active element is the epithelium of the gland substance and nipple zone; the passive agent, the gland basis and its continuation into efferent rays. The nipple is made up of smooth muscle fibre, nerves, fatty tissue and vessels. A network of muscle fibres supports and surrounds the base and sends fibres upward. The nerves form cord-like bundles on the margins of the fat divisions and of the

gland stroma, some ending in the individual muscle fibres, some in the skin papillae following the course of the vessels. The capillaries which enter each papilla of the nipple, surround the exit ducts and ramifications of the gland with a basket-like network. The veins surround the boundaries of the nipple in a polygon, and a deep venous circle returns the blood to the vena thoracica. The fatty matter is so distributed as to form a series of layers under the nipple area, so that this is uplifted above the surrounding level.

Three chief varieties of congenital malformations of the nipple may be recognized:

1. Papilla plana; 2, papilla fissæ; 3, papilla invertita. Etiologically, these deformities represent various stages of arrested development.

The function of the nipple is both that of a mouthpiece to the gland and also of a closing apparatus. Its shape may be variously modified by the sucking efforts of the child. Numerous measurements show a relationship between the height of the nipple and the breadth of its base; the higher the nipple the smaller generally its base, and *vice versa*. It would seem that it is due to a contraction of the musculature of its base and papilla, and that the vascular apparatus plays only a subordinate part. Regarding the action of the nipple in suckling, he says: If it is desired to obtain milk from the nipple of a woman, it is necessary to squeeze its base between the thumb and forefinger. As the milk wells up from many small openings it will be seen that the nipple widens and shortens; a sort of lessened tonus seems induced. If the pressure be relaxed, the nipple erects itself again. This same condition probably obtains during the sucking of the child. Not merely does the tongue surround the nipple, but it also compresses it from base to apex with a slight drawing action. The aspiratory effort must also be remembered and considered. The aspiratory power of the child unaided is not sufficient to overcome the normal tonus of the muscular apparatus of the nipple. The compression of the base of the nipple is a marked and important constituent of the act of sucking. The alternating increasing and diminishing compression of the nipple, in connection with the aspiratory effort of the child, empties the breast in a rhythmic and continuous manner, so as to maintain a due relationship to the child's breathing and acts of deglutition.

TWO CASES OF UTERINE RUPTURE.

BOSSI (*Nouvelles Archives d'Obstétrique et de Gynécologie*, 1893, No. 7) reports two cases of uterine rupture, in one of which the fœtus had penetrated the abdominal cavity. In this case the rupture occurred after violent uterine contractions, during podalic version, the fœtus slipping from the surgeon's hands into the peritoneal cavity. The patient had a contracted pelvis and was a IV-para, all previous labors having been premature and difficult. Porro's operation was performed and the pedicle, encircled by elastic bands, replaced in the abdominal cavity. The operation lasted twenty-five minutes. After twenty-five days all the elastic ligature came away by the vagina. Recovery complete.

In the second case rupture was not recognized. The case was one of placenta prævia in which podalic version was done. When the surgeon pro-