uterine lochia. Laceration of the cervix was present in twelve cases, eleven of them being spontaneous labors. There was no evidence that these lacerations produced any effect upon the uterine lochia. Vaginal examinations under aseptic precautions had but very slight effect in the presence or absence of bacteria. Ten of the cases had operations and the streptococcus was found in one case where version was performed. In one delivered by forced labor gonococci were present. In the remaining eight, three were entirely free from bacteria, three showed gonococci, while two showed other germs. Leukocytes were observed, but in the act of destroying germs in the uterine lochia obtained in these cases.

The Streptococcus Pyogenes in the Lochial Discharge of Normal Patients.

—SCHENK and SCHEIB (*Zeit. f. Geburtshülfe und Gynäkologie*, Bd. lvi. Heft 2, 1905) report the results of their examination of the lochial discharge of normal puerperal cases in the obstetrical clinic at Prague.

More than one-third of all normal puerperal patients had on the seventh to the ninth day after confinement streptococci within the uterus. A portion of these germs were the streptococcus longus and a part of them the streptococcus brevis. In most cases these germs showed every characteristic of pathogenic streptococci. These streptococci flourish in contact with oxygen and are also found as anaërobic germs, although with decreased virulence. Many of these cultures were extremely virulent when injected into mice. Serum prepared from rabbits immunized with these germs agglutinated even when greatly attenuated, the streptococci taken directly from human patients.

The Different Operations for Dilating the Cervix Uteri and Their Results.

In the *Zeitschrift f. Geburtshülfe und Gynäkologie*, Bd. lvi. Heft 2, 1905, HEMMERSCHLAG reports his experience in the Königsberg clinic with the different methods for dilating the cervix uteri.

In 8000 labors it was necessary in 243 to dilate the cervix artificially giving a frequency of this operation of 3 per cent.

The first method considered is that of using the body of the fetus as a dilator during delivery. This was done in one hundred and thirty-five cases of which one hundred and twenty-three cases were of version and twelve the bringing down of the feet in breech presentation. The indications for these operations were placenta prævia one hundred and ten, infection eleven, eclampsia seven, premature separation of the normally attached placenta two, maternal disease two, pneumonia one, transverse position of the fetus one, and asphyxia one. The operation one, transverse position of the fetus one, and asphyxia one. The operation was undertaken when the cervix would admit two fingers and if necessary to secure this dilatation Hegar's dilators or a tampon of iodoform gauze was employed. The time occupied in concluding labor by this method varies from fifteen minutes to ten hours, with an average of two hours and fifteen minutes. In general when the feet can be brought through the cervix labor can be ended within two hours. In one hundred and thirty-five operations there were eleven maternal deaths, five from septic infection, three from anæmia, one from eclampsia, one from pneumonia, and one from cardiac disease. The morbidity was 38 per cent. and in 29 per cent. of the mothers there were considerable lacerations of the cervix. In twenty-two of the mothers parametritis was present after labor, in twenty vaginal prolapse and in seven

endometritis. Among the children the mortality reached the high figure of 90 per cent. but with 10 per cent. surviving children.

Dilatation with elastic bags was performed forty-seven times. The indications for placenta prævia in nine cases, eclampsia in eight, induced labor in eight, fever in seven, contracted pelvis in five, asphyxia in two transverse position in two, tuberculosis in two, and premature separation of the normally attached placenta. The average time necessary for dilatation was seven and a half hours. In two cases the bags failed utterly to secure a result. In four cases prolapse of the fetal arm occurred and in five cases prolapse of the cord. Among the forty-seven patients there were four maternal deaths, two from sepsis, one from anæmia and one from eclampsia. The morbidity was 39 per cent., 24 per cent. of cases had cervical lacerations extending to the vaginal junction. Among the children 64 per cent. lived and 36 per cent. were stillborn.

Dilatation by Bossi's dilator. This method was employed in twenty-five cases. Every precaution was taken to avoid laceration and a strict account was kept with a watch of the time consumed. Two minutes were occupied in securing a dilatation of 0.5 cm. If the resistance of the cervix was great, less dilatation was produced in the same time. When dilatation reached 9.5 to 10 cm. if the patient was at full term labor was terminated. The time consumed in dilatation varied from fifteen to forty-five minutes. After removing the instrument a very careful exploration was made to determine the presence or absence of laceration. After the use of Bossi's dilator it was considered best, if possible, to deliver by forceps. If version was performed, special care was exercised in bringing the head through the cervix to avoid laceration. The indications for the operation were eclampsia in nine cases, infection in nine, premature separation of the normally situated placenta in two, tuberculosis in two, prolapse of the cord in three. The operations performed for dilatation were the use of forceps in thirteen cases, perforation and cranioclasia in four, version and extraction in five, extraction alone in one case, and expression of the fetus in two cases. Of the twenty-five mothers, four died: two from eclampsia, one from septic infection, and one from tuberculosis. In autopsy upon patients dying after dilatation the cervix was examined to determine the presence of laceration. In two of the four cases laceration was absent. In one there was laceration with bruising of the muscular tissue extending to the serous coat and in one case injury extended to the parametrium. The febrile morbidity was nothing, 33.3 per cent. of the cases had laceration of the cervix; four cases had chronic parametritis and three had prolapse of the vagina. Of the children 56 per cent. were born living and 44 per cent. were stillborn.

Dührssen's method of deep incision into the cervix was employed in thirty cases. It was limited to primipara in whom a sharp edge of tough resisting tissue was found at the external os. Incisions were made laterally and posteriorly but not anteriorly to avoid wounding the bladder. These incisions were not closed after delivery. The indications for the operation were fever in thirteen cases, eclampsia in one hundred and two, uterine rupture in one, asphyxia in two, and rigidity of the cervix in four. The operations employed for terminating labor after incision with forceps in twenty-three, version extraction in two, perforation in three, and spontaneous labor in two. The mortality among the mothers was two from eclampsia. The morbidity was 30 per cent. So far as

the after-effects were concerned no injurious after-effects were observed in any of the cases. Of the children 76 per cent. lived and 23 per cent. were stillborn.

Vaginal Cæsarean section was performed by separating the bladder and by incising the cervix anteriorly to the border of the peritoneum. The operation was done seven times: twice for carcinoma of the cervix and five times for eclampsia. When the cervix was tightly closed the beginning of dilatation was made by the use of Hegar's dilators to provide for the escape of lochia. The placenta was delivered before the incisions were closed and the uterus was tamponed with iodoform gauze. In the two cases of carcinoma of the cervix the uterus was extirpated through the vagina after the delivery of the child. One of these patients lived four months and the other six months after the operation, both perishing from cancer. Of the five cases of eclampsia three died. Three of the children were born living and four were stillborn.

In reviewing the results of these different methods it was noticed that dilatation by Bossi's dilator was complete in thirty minutes on an average with 33.3 per cent. of laceration. Dilatation with the body of the child occupied on an average two hours with 29 per cent. of laceration. Dilatation with elastic bags consumed seven and one-half with 24 per cent. of lacerations.

Septic mortality of the mothers after incision of the cervix was nil, after dilatation with Bossi's dilator was nil, after the use of the elastic bag it was 3 per cent., after dilatation with the body of the child 2 per cent., and after vaginal Cæsarean section 4 per cent. The morbidity ranged from nil to 39 per cent. The lowest mortality rate in eclampsia was seen after dilatation with Bossi's dilator, whilst the highest mortality rates after eclampsia occurred with the use of elastic bags. Probably the length of time required for the use of these bags increased the mortality. The mortality among the children in eclampsia was 100 per cent. when the child's body was used as a dilator and 20 per cent. when the cervix was opened by incisions. In placenta prævia the best results for the mother were obtained by using the child as a dilator, with the highest fetal mortality. In infection the best results for the mother were obtained by dilatation through incisions and the results for the child were also the best. It is thought that vaginal Cæsarean section should be limited to hospitals but that the other methods are available in private houses. Bossi's dilator should be used by the specialist only, on account of the danger of severe laceration which accompanies its use.

A Contribution to the Study of Apparent Death in the Newborn.—**AHLFELD** (*Zeitschrift f. Geburtshülfe und Gynäkologie*, Bd. lxi. Heft 1, 1905) reports a number of cases of this complication and from his study of the subject concludes that in most of these cases increased pressure within the cranium, usually from hemorrhage, causes a slowing of the heart's action, while the respiratory centre is still intact and the child is receiving oxygen through the placenta. When birth occurs and respiration is established respiratory efforts are not sufficient to dilate the lungs and to give oxygen to the blood and the fetal heart. The death of the child occurs through increased intracranial bleeding. In the cases where the child was in a hot bath dilatation of all the capillaries lessened the intracranial bleeding and respiration apparently