also compares this method of treatment with abdominal section. In 140 abdominal sections for these accidents 54.2 per cent. recovered, 45.8 per cent. perished. In 2 cases the intestine was compressed to such an extent as to become gangrenous. The indications for operation were the entire escape of the child from the uterus, profuse hemorrhage, the impossibility through contracted pelvis or other cause of removing the child through the pelvis, the retention of the decapitated head, inclusion of the intestine, and the impossibility of delivering the child after craniotomy complicated by uterine rupture. From those operated on without indications recognized as valid the mortality was over 50 per cent. Of those operated upon with indications recognized as valid the mortality fell to 42.8 per cent.

He has also studied the effect upon the patient of transportation to hospital before and after labor. Transportation to hospital before delivery increased the mortality 8.1 per cent. This probably arose from the increased injury to abdominal tissues produced by the jolting, with the child still within the abdomen. A strict adherence to the recognized indications for the operation reduced its mortality in these cases.

Of those patients who were not transported to hospital, 29.1 per cent. more recovered than of those who were transported. This result is remarkable, when we consider how unfavorable are the surroundings of many cases in private houses. There can be no question of an increased mortality accompanying transportation.

Regarding the choice of methods of operation, where total extirpation was practised through the vagina, 43.8 per cent. recovered; with total extirpation through the abdomen, 46.1 per cent. recovered; with supravaginal amputation, 49.1 per cent. recovered; with suture of the uterus, including the muscle, 52.5 per cent.; with suture of the serous covering of the uterus, only 66.6 per cent. recovered; with methods of treatment which do not require operations upon the uterus itself, 66.6 per cent. recovered. It is observed that the greater the operative interference the higher the mortality. The causes of death in these cases were septic infection of the peritoneum in 57.1 per cent.; hemorrhage in 42.8 per cent. Among those patients who were transported, hemorrhage was more fatal than septic infection. In comparing the results of treatment by operation and without operation, he finds that after abdominal section the mortality is 48.1 per cent.; for conservative treatment not requiring abdominal section, the mortality is 37.1 per cent. He believes that abdominal section should be restricted to those cases in which rupture of the uterus occurs in patients already in the hospital. Transportation of patients after this accident should, if possible, be avoided. Drainage with a drainage tube passed into the cervix is useless; and in cases where the bladder is wounded, he believes that the use of a gauze tampon and permanent catheter give the best results. This should be accompanied by the use of a compression bandage and efficient tampon of the vagina. If operation is undertaken, it should be the total removal of the uterus through the abdomen or the tamponing of the uterus followed by suture of its serous coat.

The Cause and Treatment of Eclampsia.—ZWEIFEL (*Archiv für Gynäkologie*, 1905, Bd. lxxvi., Heft 3) publishes the second part of an exten-

sive article upon this subject. He recognizes eclampsia as caused from deficient oxidation of albuminoid material, with the abundant formation of lactic acid, which may often be isolated from the urine. He believes that the presence of lactic acid derived from proteid in the urine of man or beast is always a pathological condition. He draws attention to the researches which have been made to determine the presence of these compounds in the blood of the mother and child. He believes that these compounds may produce changes in the liver, which are the cause of the disordered metabolism which produces this disease.

In dealing with the subject of treatment, he believes that the presence in the blood of a child and in the blood from the placenta of lactic acid indicates the speedy termination of pregnancy. The same poison which threatens the mother is evidently threatening the child, and the interests of both mother and child are best conserved by speedy delivery.

The method of delivery he believes should be selected in accordance with the degree of dilatation of the cervix present. If there is almost full dilatation, or sufficient to admit three fingers, he does not believe that artificial dilatation is necessary. He would rupture the membranes as soon as possible. Where the cervix admits but one finger he would introduce an elastic bag, and when dilatation had begun he would make multiple incisions, applying clamps to the edges if hemorrhage occurred. He would not rely too much upon elastic bags, because of the changes which go on in the rubber, making them brittle and liable to break. He is in the habit of keeping his elastic dilators in glycerin, which tends to prevent these changes.

He believes that metal dilators like those of Bossi are decidedly useful.

The most difficult cases are those in which the cervix is practically unchanged and no dilatation has begun. Here it is difficult to decide whether the use of Bossi's dilator is justifiable. In such cases he has four times seen very serious lacerations of the cervix, and in one case a perforating rupture of the uterus. In one instance a half hour was occupied in dilatation, and, although every care was employed, a tear occurred which extended the entire length of the cervix. Dilatation with elastic bags is certainly less dangerous if it can be employed. As regards Bossi's dilator, he would follow out his usual maxim in new methods of treatment to try all and adopt the best. In hospital cases where the cervix is undilated, he believes that vaginal Cæsarean section will prove useful. In private cases abdominal Cæsarean section can be more readily carried out. He does not believe that in eclampsia one should wait until the cervix has been dilated spontaneously, because of the danger which repeated convulsions bring upon the mother.

In operating he would employ chloroform narcosis. He would avoid large doses of morphine, because this substance, when injected into animals, produces lactic acid in the urine. He believes that bleeding, followed by the injection of salt solution and solution of carbonate of sodium, is the most valuable method of treatment. He would also introduce as rapidly as possible into the body alkalis combined with free acids, as in solutions of the tartrate of sodium. If necessary, he would introduce the stomach-tube, wash out the stomach, and insert these solutions through the tube. To stimulate the secretion of urine, he has found preparations of squills most valuable. Infusion of digitalis

he also uses. He believes it to be a valuable resource for the patient if deep respiratory movements can be excited. He has accomplished this in some cases by stimulating the phrenic nerves with the Faradic current. He recognizes fully the fact that in some cases every known method of treatment is absolutely without effect. In nephritic cases during pregnancy he would deprive the patient of eggs and meat, giving fruits, vegetables, and milk instead. During the last months of pregnancy the urine should be examined every two weeks.

GYNECOLOGY.

UNDER THE CHARGE OF

HENRY C. COE, M.D.,
OF NEW YORK.

Treatment of Diseased Adnexa.—In a discussion of this subject before the Berlin Obstetrical and Gynecological Society (*Centralblatt für Gynäkologie*, No. xlviii., 1905) JUNG referred to the great value of the hot-air treatment, reporting 116 cases in which inflammatory exudates disappeared, both with and without evacuation of pus. DUTZMANN asserted that much could be inferred with regard to the presence of pus in the pelvis from examination of the blood, especially in cases in which it was doubtful whether the condition was tubal pregnancy or disease of the adnexa. In cases of marked anemia, or of small abscesses buried in exudate, the results might be negative, but nearly all observers agreed as to the value of hyperleucocytosis as an evidence of suppuration. STRASSMANN was strongly in favor of explorative puncture, and preferred the vaginal to the abdominal route for the removal of diseased tubes and ovaries. In the case of abscesses (especially ovarian) situated at the pelvic brim, he advises a lateral incision directly over the tumor. He favored the treatment with hot air. MAINZER opposed explorative puncture as an uncertain and dangerous procedure. He preferred posterior colpotomy to laparotomy, having lost only one case out of 152, and had had no subsequent complications.

Surgical Treatment of Uterine Cancer.—JACOBS (*Lancet*, July 22, 1905) favors early diagnosis and the most radical operation possible. In eight cases of vaginal extirpation, with a primary mortality of only 1.2 per cent., not a single patient was living after the lapse of four years. In 96 cases of abdominal hysterectomy (6.3 per cent. mortality) a recurrence had occurred in every instance within six years.

The writer urges the importance of removing the lymph nodes, even those which appear to be healthy. He believes that cancer does not recur, but simply continues to extend from diseased areas which have not been removed.