

vesicular. There is a great difference between modified smallpox and the unmodified variety.

Dr. T. B. SHEA of Roxbury: I think something might be said in regard to varicella. Dr. Bullard said that this is a disease occurring essentially in children. During the past week I have seen several cases of varicella in adults. The textbooks pass this disease over very lightly by saying that it is a disease of childhood. Varicella is not a light thing in adults. The history looks a good deal like smallpox. The eruption does not appear for twelve or fourteen hours, and sometimes it commences on the forehead, as does smallpox. Now, as to the question of the eruption of smallpox in the beginning always being found on the face. That statement is not borne out by the experience we have had this past winter. I have seen about 1,300 cases since last August. In the early cases I usually look for the eruption on the abdomen. Also another place where the eruption may be seen very early — on the arch of the foot. You will often find a few papules occurring there before they occur on the face. No matter how the disease has been modified by vaccination, I think something will always be found there.

## Clinical Department.

### POLYHYDRAMNIOS: ITS DIFFERENTIAL DIAGNOSIS AND TREATMENT, WITH REPORT OF CASES.

BY EDWARD P. DAVIS, A.M., M.D., PHILADELPHIA, PA.

*Professor of Obstetrics in the Jefferson Medical College; Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Visiting Obstetrician to the Jefferson, Philadelphia and Polyclinic Hospitals, etc.*

CASE I. A multipara, much depressed in general health, with rapidly increasing distention of the abdomen, the cervix tightly closed, dilated by an elastic bag, the membranes ruptured artificially and compression made by a broad bandage held across the abdomen by assistants. Eleven quarts of amniotic fluid escaped. The fetus presented in a transverse position and was delivered by podalic version. The placenta was removed, the uterus douched with antiseptic solution and tamponed. Abdominal compression was continued, the mother making a good recovery. The fetus had but little tissue in cord and brain. Both were rudimentary in character. It was otherwise well developed and stillborn.

CASE II. A multipara, sent for removal of cystic tumor, supposed to be ovarian. During previous pregnancies had been well, during present pregnancy had much nausea and rapidly increasing distention of the abdomen beginning at the fifth month. Urine practically normal; blood showed slight anemia. On examination abdomen greatly distended; no fetal parts nor heart sounds could be found. Finger passed through the cervix detected small fetal head floating in fluid. Diagnosis of polyhydramnios was made, membranes were ruptured, and about two gallons of fluid were allowed to escape. Labor followed with twins, one of which had normal chorion and amnion with sac unbroken; the other had polyhydramnios. The placenta was large and edematous; the veins of the cord of one twin greatly enlarged and tortuous, and the tissue of the placenta and cord was granular with areas of cystic degeneration. The mother recovered well.

CASE III. Primipara, previously well. During early pregnancy excessively frightened by lightning. Was at the end of the ninth month. Came into tedious labor with excessive amniotic liquid. Male child, weighing five and a half pounds, delivered by forceps. It breathed feebly and lived ten minutes. Posterior portion of vertebral column and lower cervical and upper dorsal region deficient in development, menin-

gocele present. Placenta thicker and larger than normal, quantity of amniotic liquid not much in excess, the cord very long and spiral. The mother made a good recovery.

CASE IV. Primipara, white, aged eighteen. Mother died in confinement from cause not stated. Pelvis narrowed at the lower portion, expanded at the brim symmetrically; the urine normal, the patient fairly well nourished and suffered little during pregnancy. Complained of pain in the right upper portion of the abdomen, dyspnea and sleeplessness. On examination, abdominal distention marked; fetus could not be outlined nor could fetal heart sounds be distinctly heard; the patient's lower limbs were considerably swollen, her heart action labored. The patient complained of indefinite pains for several days when the os was found fully dilated. The patient was given tincture of nuxvomica, the membranes were ruptured and compression applied to the abdomen. When the membranes ruptured, the head immediately engaged, the child descended and was allowed to emerge from the body of the mother gradually.

The placenta was removed, the uterus douched and packed with gauze. The mother made an uninterrupted recovery. The fetus gasped but did not breathe; its heart beat persisted for three-quarters of an hour in spite of respiratory failure. Upon autopsy, general dropsy was found, and in the abdomen and pericardium a large quantity of fluid. The lungs were edematous, the kidneys showed atrophy of the pyramids, and the liver was softened and enlarged. The cord was shorter than the average; the placenta boggy, light in color, large and friable. The decidua was much roughened, resembling a fibrinous exudate.

CASE V. Multipara, with moderate quantity of fluid. Dilatation well advanced, but pains inefficient because of over-distention of the uterus. Made patient sit upon a bucket, punctured membranes and allowed several quarts of fluid to escape. Gave quinin and ergot. The child was speedily delivered; it failed to nourish properly and died in ten days with symptoms of intestinal obstruction.

By polyhydramnios is meant more than two pints of amniotic liquid at full term. As much as seven gallons has been seen in the human species; pathology of the condition not fully known. Many conditions accompany polyhydramnios. The placenta often large, dropsical and infiltrated, Jungbluth's vessels often enlarged, amnion and chorion may be thickened with extensive fissures in the epithelial layer of the amnion and fatty degeneration of cells. By experiment, seven times more fluid passes through veins than through arteries of cord into the placenta. Any fetal condition causing venous engorgement tends to produce polyhydramnios. Irritating substances formed in lymphatics may cause this condition. It does not result from increased renal action in the fetal kidneys. Excessive secretion from the cerebrospinal canal of the fetus may contribute to polyhydramnios. Polyhydramnios is normal at the fourth month and its persistence results from failure in normal development. By cryoscopy further information regarding the osmotic properties of maternal and fetal blood and of the liquor amnii may increase our knowledge. Bacteriology gives no information upon the subject.

The diagnosis is made by first diagnosing pregnancy, then by observing that in polyhydramnios we can usually obtain evidence of faint uterine contraction, and can often insert the finger through the cervix and detect a presenting part. Ectopic gestation must be kept in mind as

polyhydramnios may complicate ectopic pregnancy. In ovarian cyst the illness is longer, the swelling at first unilateral. The intermittent hardening of the tumor is absent and the uterus can be found but little enlarged. In ascites the dulness changes when the position of the patient is altered.

When pregnancy is found, a second diagnosis must be made to recognize or eliminate the presence of pregnancy and ovarian cyst, pregnancy and ascites, plural pregnancy, an hydatid mole, a very large child or a malformed fetus. In hydatid mole the pear-shaped uterus has little fluctuation and there is repeated discharge of blood. In large or malformed fetus the heart can usually be heard and palpation reveals the child. While twin pregnancy can generally be recognized it may be completely mistaken for polyhydramnios. In exceptional cases, ovarian cyst complicating pregnancy may be difficult to diagnose and exploratory incision may be necessary.

Attention is called to misleading phenomena, the absence of such tension upon the membranes as would be expected from the quantity of amniotic liquid and also the absence of early shortening of the cervix.

Treatment by drugs is without value. When polyhydramnios is slight and not increasing, the patient's health remaining good, pregnancy should not be interrupted. When distention increases rapidly and the patient's health is impaired, under thorough antiseptic precautions the cervix should be dilated sufficiently to admit the finger. A pair of uterine dressing forceps, closed, should be inserted and the membranes ruptured, the forceps opened and a rent sufficiently large made to permit the introduction of the finger. Fluid should be allowed to escape very gradually until the presenting part descends firmly against the cervix. Firm pressure must be made over the abdomen by a many-tailed abdominal binder or broad bandage held by assistants. The patient must be watched as labor is often precipitate and the fetus may assume unfavorable positions. Labor should not be hurried in the interests of the child because the fetus is often deformed.

Polyhydramnios is dangerous to the mother from over-distention, relaxation, hemorrhage and increased danger of sepsis. The uterus must be completely emptied and made to contract. A hot intra-uterine douche of one per cent. lysol, tamponing with iodoform gauze, the hypodermatic use of strychnia and ergot and other stimulation are necessary.

Occasionally after abdominal section, the excess of amniotic liquid disappears by absorption.

TRAIN employees of the Northwestern Road are to receive instruction in the science of medicine and the art of surgery, so that they shall be able to set a broken leg and bind up the wounds of the injured. W. A. Gardner, general manager, now has the plan under consideration, and, together with Dr. Owen, chief surgeon of the company, is arranging the details.—*Medical News*.

## Medical Progress.

### REPORT ON THE PROGRESS OF SURGERY.

BY HERBERT L. BURRELL, M.D., AND H. W. CUSHING, M.D.,  
BOSTON.

#### IMMEDIATE DEATH DUE TO SPINAL COCAINIZATION.

F. LEGUEU,<sup>1</sup> without intending to reopen the discussion as to the value of spinal cocaineization, a method of anesthesia which he has hitherto practised and advocated, considers it to be his duty to report two recent cases in which death followed the injection of cocaine into the spinal canal, within a few minutes. The technique, the dose and the cocaine solution used were the same as were utilized with success in cases preceding and following those which were fatal. The cocaine which caused death was analyzed and found to be unaltered. Operation was proposed in one of the two instances for rupture of the patellar ligament, and in the other for strangulated inguinal hernia.

#### INTOXICATION WITH BISMUTH.

The general impression prevails that when symptoms of poisoning arise in connection with the administration of bismuth or its combinations, the manifestations are due to the presence of impurities, the most important of which is thought to be arsenic. Evidence is not wanting, however, tending to show that uncontaminated bismuth may give rise to toxic effects, which in some respects resemble those due to lead and mercury. A number of such instances are cited in a brief communication by Dr. Dreesmann,<sup>2</sup> who also reports a case under his own observation. Thus, following the dressing of wounds and wound cavities with bismuth subnitrate and other preparations of bismuth, as well as the internal administration of large amounts, there has been observed in the urine a white precipitate, becoming black, together with albumin and tube casts, stomatitis, pain in and loosening of the teeth, a metallic taste, with a blue line on the gums, and dark discoloration of the tongue, diarrhea, and pigmentation and ulceration of the intestinal tract, especially the large bowel. It has been shown experimentally that pure bismuth introduced into the pleural or peritoneal cavity is capable of exciting adhesive inflammation, and even perforation. The case of Dr. Dreesmann occurred in a man thirty years old, who had been quite severely burned and was treated with local applications twice daily of a 10% ointment of bismuth subnitrate. In the course of three weeks a black sediment was noted in the urine. In the course of three weeks more marked stomatitis developed, with pain and difficulty in swallowing. The teeth became loose and a bluish-black line appeared at the margin of the gums. Similar discolorations appeared also on the tongue. An area of ulceration resulting from the burn also exhibited black pigmentation, which

<sup>1</sup> *La Presse méd.*, Nov. 9, 1901; *Medical News*, Dec. 14, 1901, p. 935.

<sup>2</sup> *Berlin. klin. Woch.*, 1901, No. 36, p. 94; *Journal of American Medical Association*, Nov. 23, 1901.