

to go out, the child can get its airing by the use of the window tent. The whole cost of the tent need not exceed two dollars. Those using tents gained on an average of 3.3 lb. more than those who did not use them.

#### DIET AND THE PROPER MASTICATION OF FOOD.

The dietary was based upon the forty-eight-hour list of food. Cereals were added and the diet balanced. The child was encouraged to take from three to six glasses of milk daily. The total food value was increased from an average of 1,200 calories per day to an average of 2,000 calories per day. Every possible means was used to get the child to eat slowly, in two cases it being necessary for the parent to feed the child with a spoon for short periods.

#### SCHOOLS.

Children attended school regularly. In a few cases it was necessary to take them out for a short time. They always gained immediately upon being taken out of school. The writer believes that there should be open-air schools for all delicate children. The establishment of such schools would mark a great step in advance in preventive medicine.

#### CONCLUSIONS.

The class method is particularly well adapted to the proper treatment of delicate children. The spirit of competition, the "game" in it, has a powerful attraction to the child, aiding greatly in his management and control.

The steady gain in weight in children following directions furnishes a strong incentive to the parents and the children alike.

The class method makes the necessary instruction of the parents easy and effective.

The results obtained each week remove prejudices and fears and convince in a moment, as if by magic, where hours spent in arguments fail.

In the giving of instructions and directions to the parents and the children assembled together there is an enormous saving of time.

The class method furnishes the best training school for the social worker. She can here learn what instructions are to be carried out; what the object sought. She catches the spirit of the work and is enabled to relieve the physician of a large mass of detail for which he has neither the time nor the energy to perform, and for which the social worker is the one person especially qualified by sex and training to carry out.

### Clinical Department.

#### THE PRESENCE OF AIR IN THE BLOOD VESSELS IN MEDICO-LEGAL AUTOPSIES.\*

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Air may enter the circulation whenever a blood vessel, being opened by accident or design, makes a communication in the circulation between a

negative pressure in the blood vessel and the positive pressure of the surrounding air. In the arteries, the blood pressure precludes this possibility. In the veins, however, the natural flow of the venous blood makes a tendency for the vessel, when cut off from the blood circuit, to empty itself toward the heart. This fact, especially when the vessel belongs to one of the great cavities of the body, creates the conditions of negative pressure within itself and, if the vessel is in communication with the air, bubbles may enter and are carried to the heart and lungs.

The chief interest in this subject to the medical examiner rests in those cases where air enters the venous sinuses of the uterus, where the detachment of the placenta in the pregnant uterus opens venous trunks having a portion of their course in the abdominal cavity and air enters through the dilated or patulous os. This condition occurs almost always as a result of the working of the professional abortionist.

In the case which I wish to report, the bubbles of air or gas did not come from any attempt at producing abortion and show at least the possibility of air appearing in the circulation through the uterine sinuses as a result of practices not connected with the production of abortion.

M. P., twenty-nine years old, a married woman, but at the time of death separated from her husband, the mother of three children, the youngest five years old, met by appointment on an evening in May her paramour and went with him to a lonely spot in the woods, where they indulged in sexual intercourse. Immediately after the act, the woman stood up, exclaimed, "Oh, my God, my head," and fell into her lover's arms unconscious. There was no convulsive effort. The man summoned a physician, who found the woman dead. The autopsy was made about twelve hours after death. Inspection of the body showed the presence of bits of dead twigs and pine needles pressed against the skin of the buttocks and a few pieces on the pubic region. About the vaginal orifice was a small quantity of dried dark-colored blood, and some fluid blood of dark color was seen on dilating the vagina. There was a slight tumefaction of the lower abdominal region. On opening the pulmonary artery *in situ*, there escaped blood thickly mixed with bubbles of air or gas. These bubbles were found also in the right side of the heart, which was dilated, and in the large venous vessels of the thorax and abdomen. The brain and meninges were normal. The uterus were found enlarged to a point about half way between the pubic bone and the umbilicus. It contained a perfectly formed male fetus nine inches long in unruptured membranes. The placenta was separated from the uterine walls in its lower segment over an area of about three or four square inches. The os was partially dilated.

The evidence showed that the lover had knowledge of the woman's condition and that she was anxious to rid herself of the fetus and had approached a physician, a man of good repute, who had refused to aid her in this direction. There was no evidence of instrumental attempt at producing abortion.

This woman, although separated from her husband, was not legally divorced and the act of sexual connection was an adulterous act and the

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man, if a partner in causing her death in this manner, was guilty of compounding a felony and liable, therefore, for manslaughter. No arrest was made.

It seemed to be a reasonable diagnosis to assign air-embolism as a cause of death, the air entering the partially dilated os and the exposed uterine sinuses during the muscular contractions incident to the sexual act.

Several years ago, Welch and Nuttall reported the discovery of the bacillus aerogenes capsulatus, which develops very rapidly in bodies after death, causing the appearance of bubbles of gas in the blood. The germ may be introduced into the body whenever a blood vessel is opened. Welch states that it is probable that many cases reported from the autopsy in which the patients are said to have died from the admission of air into the circulatory system have in reality died from some other cause, the gas produced by the bacillus having been mistaken for air.

It would appear, then, in such a case as this that the cause of death may not be definitely assigned without taking a culture from the blood, and that the medical examiner would have difficulty in defending his opinion of air-embolism as the cause of death in the face of a cross-examination by an attorney who had knowledge of the activity of the bacillus aerogenes capsulatus unless the medical examiner had previously fortified himself by making a culture from the blood of the deceased person to establish the absence of the bacillus.

## Medical Progress.

### REPORT ON OBSTETRICS.

BY ROBERT L. DE NORMANDIE, M.D.

Human Blood Serum in Hemophilia Neonatorum.

Chin Posterior Positions.

Pyelitis in Pregnancy.

Intramural Abscesses of the Puerperal Uterus.

Multiple Abscesses of the Puerperal Uterus.

Fibroma of the Uterus in Pregnancy and the Puerperium.

Action of Animal Extracts on Uterine Contractions.

Coagulation Time of the Blood in Phlebitis.

Jaundice in Four Successive Pregnancies with Fatal Jaundice in the Offspring.

Puerperal Sepsis Treated by Intravenous Injections of Magnesium Sulphate.

Eclampsia Treated by Continued Sugar-Water Instillation.

Incontinence of Urine after Labor.

Extraperitoneal Cesarean Section.

Pubiotomy.

#### NORMAL HUMAN BLOOD SERUM AS A CURATIVE AGENT IN HEMOPHILIA NEONATORUM.

WELCH<sup>1</sup> reports nine cases of hemophilia neonatorum in which he has used normal human blood serum. He briefly mentions the fact that certain untoward symptoms may arise when animal serum is administered, and says further that death sometimes has followed direct transfusion of blood. The etiology in these cases is unknown, but in no case of this series was it traumatic. The bleeding took place from various parts and occurred in various amounts. The serum was given in varying dosage, depending

upon the urgency of the case. Welch advises that at least 10 ccm. be given at the first injection and that it be repeated three times a day if the infant be bleeding but moderately. In severe cases it should be given every two hours, and in large quantities. He advises to begin the treatment at the first indication of bleeding, no matter how insignificant. The charts accompanying the paper are most striking and instructive. Should this method of treatment prove in other hands as certain as in the author's, it will be a great advance in the treatment of this condition. The method of obtaining the serum is very easy, and when one appreciates the great difficulties of doing a direct transfusion on newborn babies, and the comparatively few surgeons who can do it, it very readily is seen that this may become the accepted treatment for hemorrhagic disease of the newborn.

#### TREATMENT OF CHIN POSTERIOR POSITION.

Unterberger<sup>2</sup> reports two cases of chin posterior which he successfully delivered. Cases where the face is high and chin posterior he does not consider, but only those cases where the chin is posterior in the outlet of the pelvis and on the pelvic floor making other treatment except delivery impossible. Many excellent obstetricians he says advise at once perforation even of a living child in this condition. Unterberger does not agree to this. Forceps he advises if possible with the double application of Scanzoni. On two cases that he reports this maneuver failed, but he was able to rotate manually the chin from the posterior position anteriorly and then delivered the one case with forceps and the second case by Kristeller's method of expression. He favors in all cases where the chin is posterior, first rotating the head with the hand.

#### TREATMENT OF PYELITIS OF PREGNANCY BY LAVAGE.

Pilcher<sup>3</sup> reports six cases of pyelitis of pregnancy where he has catheterized the ureters and irrigated the pelvis of the kidneys with a 25% solution of argyrol. He reviews the causes previously mentioned for pyelitis. From his own studies he concludes that it is perfectly safe in cases where the symptoms are not severe to wait eight or ten days without attempting to catheterize the ureters, using the rules already formulated for diet and urinary antiseptics. From his observations he does not agree with the advice that the patient frequently assume a knee-chest posture. In the course of his cystoscopic examinations he found that more was to be gained by favoring drainage with the kidney on a higher level than the bladder. In cases of persistent temperature, with pain and pyuria, he advises passing a catheter to the pelvis of the affected kidney, draining it thoroughly and then to instill a dram of 25% argyrol. He agrees with the other writers that abortion or premature labor is seldom necessary. He is satisfied himself that the reaction of the urine in the pelvis of the kidney at least may be alkaline. This point depends upon the amount of retention there is in the pelvis.