

months I have been using cane-sugar together with the dextrin-malt preparations and have had good results. In cases with acid stools and a large amount of mucus and blood, it is a mistake to resume the use of milk-sugar too soon.

DR. HENRY COIT, Newark, N. J.: There is a chemical as well as a gross difference due to contamination between the commercial milk-sugar and mother's sugar of milk. The former contains bacterial toxins. It should be boiled before using.

DR. J. P. CROZER GRIFFITH, Philadelphia: A large number of cases of scurvy are caused by the use of malt preparations.

DR. ALFRED HAND, JR., Philadelphia: I have always felt that lactose tends to produce diarrhea. Where a child is obstinately constipated, lactose or saccharose has a tendency to regulate the bowels.

DR. THOMAS S. SOUTHWORTH, New York: Starch can be overused in feeding infants and one should be careful as to the amount used and also in regard to the diluents. I have used barley-water largely during the past decade in children who were not doing particularly well on other diluents. I agree with Dr. Abt that the effect of malt-dextrin mixtures is constipating rather than laxative; this is probably due to the extraction of fluid from the tissues.

DR. JOHN LOVETT MORSE, Boston: I have looked into the question of maltose in infant-feeding to find out the primary basis for the wave of this form of infant-feeding that is sweeping over the country. I cannot see a single reason for the use of milk-sugar. Chemically, contrary to the opinion often expressed, it is the same as mother's milk-sugar. Boiling milk-sugar may destroy the bacteria, but it does not seem to destroy the toxic products. During the summer of 1910, in Boston, maltose solutions were employed in the treatment of dysenteric diarrheas and it was felt that nothing but good resulted. It should be remembered that the bacteria we had to deal with might not be the same as those occurring in the diarrheas of children in other cities.

A Case of Retarded Development in a Boy Treated with Thymus Extract

DRS. CHARLES GILMORE KERLEY and S. P. BEEBE, New York: The patient was a boy, aged 16, who was mentally sound, but was undersized and whose penis was small and shrunken, testicles small and resting in the canal the greater part of the time although they could be brought down. At the end of nine months of hygienic and tonic treatment, there was no change in the condition of the sexual organs. Medication was stopped and 15 grains of thymus extract was given daily. During the first six months of this treatment the genitals perceptibly enlarged and after nine months' treatment the first erection occurred. At the completion of one year's treatment hair appeared on the pubis and in the axilla. The testicles have remained in the scrotum during the past six months and the sexual organs are apparently normal. The boy has gained one inch in height.

Serum Treatment of Pneumonia

DR. ROLAND G. FREEMAN, New York: On account of the usually favorable results of treatment with antipneumococcus serum it seemed worth while to try it in a series of cases, using alternate cases as controls. The patients in the series showed high temperature with good chest signs. In none of the cases was there any evidence of irritation at the site of the injection. The serum was rapidly absorbed. The injections were followed by urticaria, but without fever or general disturbance. The average age of the children injected was 20 months, of the controls 11 months. The effect in many cases was an immediate change in the appearance of the child. Children that looked septic in several cases after the injection had a good color, were brighter, took the feedings better and seemed much improved although the condition in the lung was unchanged or seemed to be spreading. In some cases the serum injections appeared to have no results, but in most cases there appeared to be a better reaction on the part of the child after injection than before. The reaction was usually followed by some reduction in leukocytosis and the percentage of polynuclear leukocytes increased. The pneumococcus serum presented a safe way of attempting to influ-

ence the course of pneumonia in children; the addition of antipneumococcus serum seemed to offer no advantage over the use of the pneumococcus serum alone.

DR. MATTHIAS NICHOLS, JR., New York: After a fairly large experience with pneumococcus serum in both children and adults it seems to me that one should give large doses of the serum, at least 100 c.c. In a recent attempt to immunize a series of diphtheria patients against secondary pneumonia there seemed to be no reduction in the death-rate from pneumonia through this attempt at immunization, and it was difficult, therefore, to have a great deal of faith in the curative value of a serum which had so little protective power against the organisms whose activities it was designed to control. In view of the fact that good results seem to follow the use of the serum in some cases, it is advisable to use it in prolonged cases which seem to be daily losing ground, but the dosage should be large. I have seen no bad effects from the administration of the serum even though the doses were very large. I prefer to give it intravenously, but 100 c.c. may easily be given subcutaneously.

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The Relation of Thyroidism to the Toxemia of Pregnancy

DR. GEORGE GRAY WARD, New York City: These cases may be classified into (a) cases having no Graves' disease, but without sufficient thyroid secretion to promote the increased metabolism in the liver made necessary by the pregnancy, and probably due to the failure of the thyroid to hypertrophy; (b) cases associated with Graves' disease, which usually causes serious disturbance in the metabolism. Toxemias of the first group are frequently much benefited by the administration of thyroid substance in the form of either the dry extract or the serum. In toxemias of the second group, it is essential to determine whether the Graves' disease is in a condition of hyperthyroidism or hypothyroidism. If the former, rest, application of ice, milk diet, and sedatives should be employed, and if these measures fail, an antiserum should be administered. If the latter, thyroid substance should be given in the form of the dry extract, or, what is more efficient, if possible to obtain, a saline extract prepared from normal human glands for hypodermic administration. Reliance should be placed on the nitrogen partition of the urine as a guide to the severity of the toxemia rather than on the blood-pressure. Induction of labor is very slow and uncertain in these cases, and where the history of former labors is that of dystocia, elective cesarean section is probably the safest method of delivery for both mother and child.

The Treatment of Acute and Fulminant Toxemia

DR. EDWARD P. DAVIS, Philadelphia: One fact stands out preeminently in all fatal cases of toxemia of pregnancy, and that is the disorganized state of the blood, the minute hemorrhages in the liver and other organs, and, when the toxemia lasts for some time, the occurrence of pulmonary edema and of gangrenous pneumonia. The value of milk as a prophylactic diet must be insisted on. A thorough physical examination should give warning of the approach of fulminant toxemia. Should the conditions be unfavorable for spontaneous delivery, and the uterus makes an effort to expel its contents, rapid delivery by abdominal section is the operation of choice. I prefer this to vaginal section because it is free from mechanical difficulty, and does not open the veins above the pelvis and lower portion of the birth canal.

Treatment of Eclampsia

DR. FRANKLIN S. NEVELL, Boston: Limitation of absorption of toxins is only to be accomplished by ending the pregnancy. The method of operative delivery must be chosen to suit the needs of the individual patient and skill of the obstetrician. Prevention of damage by toxins already absorbed should be undertaken, and the control of convulsions by the

free use of morphin to the point of slowing respiration to twelve per minute; also lowering of blood-pressure to approximately normal point by venesection in order to reduce the strain on the heart. Free catharsis should be induced by the use of salines and croton oil in repeated doses until several watery movements have resulted. The lower bowel should be washed out by colonic flushing. Probably most of the toxin is excreted by the intestinal tract, and if not removed it may be reabsorbed and cause a recurrence of symptoms. In these cases and in patients who have reacted badly to operative procedures, direct transfusion of blood should be considered as a possible life-saving procedure.

Discussion on Eclampsia

DR. GEORGE TUCKER HARRISON, Charlottesville, Va.: It is logical to maintain that in cases of acute toxemia in pregnancy, whether with or without eclamptic attacks, the indication for treatment is to empty the uterus as speedily as possible. Forceps should be applied only when the head is fixed in the pelvis. In the case of a primipara, when the cervix is maintained in its entire length, the indication is the vaginal cesarean section. Abdominal cesarean section should be reserved for cases of contraction of the pelvis.

DR. JOHN O. POLAK, Brooklyn, N. Y.: Before the formation of the placenta, the curet is the method of choice, and after this period anterior hysterotomy offers decided advantages. The preeclamptic state, not yielding to dietetic, eliminative and medicinal measures, justifies evacuation. When the convulsions and coma have occurred, the termination of pregnancy improves the chance of the patient's recovery, and the condition of the cervix determines whether delivery be by incision, bag or nature, supplemented by version or forceps. Finally, anterior hysterotomy should always be the choice over manual dilatation, where no effacement of the cervix has taken place.

DR. CYRUS A. KIRKLEY, Asheville, N. C.: To eliminate accumulated toxins, and to restore impaired or arrested function in the eliminative organs is the aim of treatment. Calomel and soda, followed by saline, alkaline diuretics, if not contra-indicated, the hot pack, the hot-air bath, glonoin, massage, pure air, and abundance of pure water are important aids in treatment. The uterus should be emptied as soon as it can be done without increasing the risk to the mother. While cesarean section should not be the *dernier ressort*, we should be absolutely sure that delivery by other means is impossible.

DR. REUBEN PETERSON, Ann Arbor, Mich.: If the patient fails to improve under the prophylactic treatment, the best method is to empty the uterus as quickly as possible.

DR. BARTON COOKE HIRST, Philadelphia: I have used parathyroid extract for five or six years, and I believe that in the rare types of toxemia I get better results than from the thyroid extract itself, but those toxemias that require parathyroid treatment are rare. I am strongly opposed to unqualified advocacy of the operative treatment.

DR. RICHARD C. NORRIS, Philadelphia: My last thirty cases occurred during the period when vaginal cesarean section was discussed by the profession. Of these, there were thirteen actually eclamptic women who had had forty-two convulsions; there were seventeen preeclamptic cases past the seventh month of pregnancy. This group of cases was treated by the conservative plan. One woman died without eclampsia from a wide-spread accumulation of fluid in the serous cavities, chronic Bright's disease, and none of the infants died, most of them being premature.

DR. J. WHITRIDGE WILLIAMS, Baltimore: Vaginal hysterotomy or cesarean section is the method I have employed for some years to empty the uterus for the vomiting of pregnancy. In cases of eclampsia, it is very essential to individualize, but I believe in every case, in which the cervix is rigid, and in which prompt delivery is necessary, vaginal cesarean section is the operation of choice.

DR. CHARLES M. GREENE, Boston: When these patients are put under the usual eliminative treatment, very often labor begins and they deliver themselves and recover without ever having convulsions.

DR. HENRY D. FRY, Washington, D. C.: After putting the woman to bed and taking off all food by stomach and giving nutrient enemias I use inhalations of oxygen, and if I cannot stop pernicious vomiting, I am satisfied I should empty the uterus. If a primipara has a rigid cervix I believe in doing a vaginal cesarean section every time, and not abdominal cesarean section.

DR. GEORGE W. KOSMAK, New York City: It is not fair in the treatment of these cases to assume that convulsions are the deciding factors, and that is why I object to basing a series of statistics on the presence of convulsions.

DR. HUGO EHRENFEST, St. Louis: No matter what method of treatment is resorted to in these cases of toxemia of pregnancy, the patient should be put into a hospital. It is unsafe to resort to operative measures amid unfavorable surroundings. Conservatism should always be kept in mind in dealing with this class of patients.

(To be continued)

Current Medical Literature

American Journal of Public Health, New York

May, 11, No. 5, pp. 315-398

- 1 Regulation of Marriage. J. N. Hurty, Indianapolis.
- 2 *Bacterial Contamination of Bread. K. Howell, Chicago.
- 3 Conservation of Food Products by Refrigeration. P. H. Bryce, Ottawa, Canada.
- 4 Method for Bacteriologic Standardization of Disinfectants. T. Ohno and H. C. Hamilton, Detroit.
- 5 Typhoid in New York City, Together with Methods Found Serviceable in Studying Its Occurrence. C. F. Bolduan, New York.
- 6 *New Method for Disinfection of Tuberculous Sputum. W. R. Stokes and W. N. Schmitz, Baltimore.
- 7 Practical Modification of Winslow Dirt Filter. M. C. Schroeder, New York.
- 8 Inexpensive Outfit for Collection of Bacterial Milk Samples. F. O. Tonney, Chicago.

2. **Bacterial Contamination of Bread.**—With the plan of determining the degree of bacterial contamination of the outside of bread, 100 loaves were collected by Howell from various districts in the north, south and west sides of Chicago. The loaves were about the same size, ranging from 345 to 375 gm. They were oblong in shape. The exposed surface was, therefore, about the same in all the loaves. The shops from which the samples were chosen differed greatly in conditions of sanitation. There was every degree of cleanliness from the clean shop where the bread wrapped in oiled paper was kept in glass cases, to the dirty shops where the bread was kept on a counter, far from clean, freely exposed to dust, flies and to handling by the customers. Each loaf of bread was taken to the laboratory as wrapped when purchased, since this imitated the conditions under which the bread would ordinarily be used. The entire loaf was then swabbed with wet sterile cotton and the cotton thoroughly rinsed in 10 c.c. of sterile water. From this suitable dilutions were made.

The mediums used in the experiments were gelatin, lactose-litmus-agar and lactose broth. The gelatin plates of the first fifty loaves were incubated at exactly 20 C. for seventy-two hours, those of the last fifty at room temperature (which was practically 20 C.) for seventy-two hours, and the lactose-litmus-agar plates at 37 C. for twenty-four hours before making the colony count. The count was much lower when the bread was kept under clean conditions than when the conditions were dirty. All acid colonies were picked and special search made for *B. coli* and streptococci. These were chosen as types, since they are both common and give some indication as to the cleanliness of conditions. *B. coli* was isolated from three loaves. Two of these loaves were purchased in very dirty shops. The third loaf came from a fairly clean store. Streptococci were isolated from thirty samples.

6. **Disinfection of Tuberculous Sputum.**—The new method of disinfection for tuberculous sputum, which Stokes and Schmitz have found serviceable, rests on alkaline solution of sodium hypochlorite (antiformin) as its basis. The advantage in using this material consists in the quick solution of the mucus and pus contained in the material disinfected.