THE TREATMENT OF PERNICIOUS VOMITING IN PREGNANCY BY GASTRIC LAVAGE AND CARBOHYDRATE RECTAL FEEDING.

BY

STANLEY E. DENYER, C.M.G., M.A., M.D.CAMB.,
F.R.C.S.ENG., M.R.C.P.LOND.,
PHYSICIAN, HULL ROYAL INFIRMARY; SPECIALIST IN NEUROLOGY,
MINISTRY OF PENSIONS.

VARIOUS views have been put forward as to the cause of the morning vomiting of pregnancy, which occurs from the sixth to the fourteenth week, and is more common in primigravidae than in multiparae. It usually occurs in the early morning, and where the condition becomes aggravated it occurs throughout the day. In the severest cases it may become almost continuous.

The views that have been held include as causes toxæmia, hysteria, and a reflex type. The view that it is due to a deficiency of glycogen in the maternal liver was put forward by Duncan and Harding in 1918, and the case given below was treated in accordance with it.

Mrs. H., aged 27, eight weeks pregnant, was admitted to the Hull Royal Infirmary on November 4th, 1923. Her last period had been on September 7th. She had been vomiting for three weeks, first after breakfast, then after every meal, then all day, and latterly all night, at short intervals. On the date mentioned she had been vomiting every half-hour. The vomit was green, contained mucus, and some specimens digested blood also. The pulse was 88, temperature 99.8°; heart and lungs normal, abdomen rather retracted; nothing abnormal was felt. The tongue was clean. On vaginal examination the os uteri was found soft and enlarged, consistent with two months' pregnancy. Urine: specific gravity 1030, acid, no albumin, no blood, no pus, no bile, no diacetic acid or acetone present. The blood was examined by Dr. Adamson, honorary pathologist, for the blood sugar content, which was found to be normal (0.095). The patient was very exhausted and was suffering from lack of sleep, not having slept for two or three nights owing to the almost continuous vomiting.

Treatment was started at 3 p.m. on November 4th by gastric lavage with sodium bicarbonate solution (1 drachm to the pint), one or two pints being used. Rectal salines, with half an ounce each of sodium bicarbonate and glucose to the pint, were administered, 1 pint every four hours. Solution of adrenaline, 5 minims hypodermically, was ordered every three hours for four doses or until the vomiting ceased. She was not to be awakened for the rectal salines. The end of the bed was raised by putting blocks under the lower end. A hypodermic injection of morphine 1/6 grain was given at 8.15 p.m.

On November 5th she was ordered 5 minims of the adrenaline solution every six hours, and rectal salines with no sodium bicarbonate but with glucose every four hours. Water was given by the mouth in small feeds; at 10 a.m. gastric lavage with saline solution and sodium bicarbonate 1 drachm to the pint, followed by saline solution only. Water was given at first in 1-drachm feeds every half-hour or hour, and slowly increased. The rectal salines were continued every four hours with 1 oz. of glucose and 2 drachms of sodium bicarbonate added to the 4 p.m. rectal saline. To the 6 p.m. and 10 p.m. salines 30 grains and 20 grains respectively of potassium bromide were added.

She vomited three times in the night, but the vomit was no longer bile-stained. Gastric lavage was performed at 10 a.m. on November 6th, and feeds of water increased to 2 oz. every two hours. On November 7th she was kept on water, 5 oz. every two hours, and rectal injections every six hours with sodium bicarbonate. Glucose was then added to the water by mouth in the proportion of half an ounce to half a pint. On November 8th and 9th the same procedure was followed and the vomiting stopped. On November 10th jelly was given, and on the 11th thin Benger's food; on the 12th there was slight vomiting after the Benger's food, but not otherwise. On November 13th beef-tea and bread-crumbs were given as well as weak tea and condensed milk. On the 15th there was a slight quantity of acetone in the urine, but this disappeared on the 16th, and she was put on fish, eggs, etc. On November 20th she was given lactogen as breast milk was deficient, and on the 23rd she was given chicken. The vomiting stopped on November 8th, four days after admission, except on one or two occasions, when she had slight vomiting on increasing the diet.

In any case of severe vomiting in a pregnant woman such conditions as gastric ulcer, or other gastric disease, cirrhosis of the liver, cerebral tumour, pernicious anaemia, phthisis, etc., must be excluded. It is possible that there may be a combination of causes or that the principal cause is aggravated by others. Assuming that the chief cause is lack of glycogen in the liver, due to a short period of starvation which lowers the glycogen content of the liver, vomiting may be accelerated if the patient is of a neurotic type, or if

there is a relative toxæmia of the bowel, due to constipation. The treatment of such condition can be carried out by putting the patient on frequent small meals.

Summary of Treatment.

The essentials of treatment in cases of pernicious vomiting in pregnancy should be:

1. Rest in bed.
2. Gastric lavage, with solution of sodium bicarbonate 1 drachm to the pint, one or two pints being used.
3. Solution of adrenaline, 5 minims hypodermically every three hours for a few doses until the vomiting ceases, or the adrenaline solution may be given by the mouth in doses of 10 to 20 minims in a little water. It will be found that this drug is very efficient in stopping many kinds of vomiting.
4. The omission of all feeding by the mouth, at first, and feeding by rectal salines containing from half an ounce upwards of glucose to the pint, with a small quantity of sodium bicarbonate added if there is any diacetic acid in the urine.
5. The addition to the evening salines of 30 grains of potassium bromide to help sleep and reduce irritability of the nervous system.
6. The gradual increase in feeding by the mouth, beginning with small feeds of water as described above.

In cases of vomiting of pregnancy which are seen by the physician as they are getting more severe it will be found that treatment by administration by the mouth of solution of adrenaline in doses of 10 minims of 1 in 1,000 solution added to 2 drachms of water at three to six hourly intervals, will in many cases be sufficient to stop the vomiting. The diet at the same time should be light and given at short intervals. The above treatment by lavage and rectal salines should be reserved for the more serious cases, or to those which do not respond to treatment by adrenaline.

PNEUMOCOCCAL POLYARTHRITIS.

BY

ALFRED S. GUBB, M.D. PARIS,
PHYSICIAN TO THE BRITISH COTTAGE HOSPITAL, ALGIERS.

IN view of the grave plight on admission, and for some time after, of the patient whose case is here related, and in view also of the fact that treatment was limited to the subcutaneous injection of antipneumococcal serum, the rapid improvement in the general health and the arrest of the tendency to suppuration of the joints must apparently be credited to the curative effects of the serum. The immediate effect of the treatment was evidently to kill off the colonies of pneumococci originally present in the synovial effusion in such wise that on a second examination of the fluid no pneumococci were present.

On March 5th a man, aged 25, a marine engineer, was sent to the hospital with a diagnosis of "rheumatism." He stated that three days after sailing from Kurrachee (India) he had an attack of diarrhoea which lasted about a fortnight. He had as many as twelve motions in the twenty-four hours; they were scanty and sometimes blood-stained. He lost much weight. Three weeks after cessation of the diarrhoea the left knee began to swell and caused sufficient pain to prevent sleep. That was when he was at sea, four days before admission.

On admission his left knee was much enlarged, owing apparently to thickening of the periarticular structures; little or no fluctuation could be made out over the joint. Movement was extremely limited and very painful. The ankle and dorsum of the foot on that side were oedematous. The temperature was 100° F., the pulse 130. The heart and lungs were healthy, the spleen was not enlarged. He was thin, but this, he assured us, was only since he had fallen ill. He said he had had a urethral discharge some weeks previously, but on discussing the matter with him there did not appear to be any valid ground for suspecting gonorrhoea. In any case, the urethral mucosa was normal in appearance, there was no undue moisture, and no trace of the gonococcus could be discovered on bacteriological examination.

Extension applied to the limb by means of weights afforded the patient great relief. As there was a possibility, however remote, of a gonococcal origin he was given three injections of a product known as neo-dmagon (an antigonococcal vaccine), whereupon the temperature, which had fallen to normal since the patient had been resting in bed, again rose to 100°.

During the next few days he lost ground. There was atrophy of the thigh muscles, most marked on the left side. He had no