

gastric upsets—that is, nausea or vomiting—and dyspnoea. If such symptoms occur they usually start late in pregnancy, after the thirty-fourth week. The three cases described all suffered from dyspnoea during late pregnancy, and in Cases 1 and 2 it caused some distress during the second stage of labour. In Case 1 there was vomiting in late pregnancy, which was especially aggravated after delivery and continued to be troublesome during the puerperium, probably owing to some alteration of the position and tension of the stomach after the uterus had emptied.

Treatment.—During late pregnancy the patient must rest more than usual, and if dyspnoea is not relieved should be confined to bed. Vomiting can usually be relieved by attention to the diet. Small and frequent meals of soft food or fluids may be necessary. Postural treatment may be useful, the patient herself usually finding out which position suits her best. Laxatives should be given to ensure regular bowel action. In cases with severe encroachment on the thoracic cavity induction of premature labour must be considered. A long second stage is not desirable, as the dyspnoea may increase with the pains and the patient become distressed. If, therefore, there is any reason from the history or clinical findings to suspect that labour may be prolonged, induction at the thirty-eighth week is probably the wisest course. A medical induction may be tried, and if this fails the membranes should be ruptured. If disproportion or other obstetrical complications are present caesarean section will of course have to be considered. During labour the usual sedatives should be given in the first stage. Oxygen may be necessary during the second stage and is essential if the patient becomes at all cyanosed. It should be given during the pains, and affords great relief. Low forceps delivery and episiotomy are indicated should there be the least delay on the perineum. Cyclopropane or local anaesthesia should be used.

In the puerperium careful dieting may be necessary if vomiting is troublesome as in Case 1. Vomiting usually ceases within a week as the stomach settles to its new position and gastric tension becomes adjusted.

The question of after-treatment of these large hernias cannot be fully considered here. In the majority of cases all symptoms disappear after delivery. Most authorities are of the opinion that surgical treatment is not indicated in cases of large hernia unless the sac is known to contain small gut and is therefore liable to strangulation. Morrison (see Richardson, 1929) believes that relatively few cases require operation. Treatment on medical lines should be continued if any symptoms persist.

Prognosis.—In all three cases described there was a severe degree of encroachment on the thoracic space—in two by true diaphragmatic hernia and in one by eventration of the diaphragm. The main object of this publication is to emphasize that labour may be allowed to proceed with safety under such conditions and that catastrophic effects do not occur. Whether the hernial hiatus is further enlarged as a result of labour is a matter for conjecture. Unfortunately these cases were not re-examined radiologically after the puerperium. Rigler and Eneboe, however, re-examined twenty-five cases after the puerperium in which small and moderate degrees of para-oesophageal hernia had been present in late pregnancy. They found that in only three of these cases could a hernia still be demonstrated radiologically. It seems, therefore, that though further stretching of the hiatus is probable during pregnancy and labour the hernia will retrogress as soon as the abdominal tumour is removed, and in many cases with only small and moderated degrees the condition will revert to normal. This conclusion is supported by the cessation of symptoms in nearly all cases after the puerperium.

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A NEW TREATMENT OF RHEUMATOID ARTHRITIS

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It is always difficult to prove the value of a new therapy, especially when it concerns a disease which, like rheumatoid (atrophic) arthritis, to a great extent improves spontaneously, without any treatment. The *Primer on Arthritis*, issued by the Committee of the American Rheumatism Association in 1942, contains the following about rheumatoid arthritis: "Few accurate statistics on the natural course of the disease are available, but in general it may be said that fewer than one-fourth of the patients 'recover,' one-half 'improve' or the disease becomes 'quiescent,' and the remaining one-fourth become progressively worse. . . . It is particularly important that these facts should be borne in mind when one is assessing the value of any therapeutic regimen."

According to literary data, the results of the gold, heteroprotein, and vaccine therapies are almost the same—that is, 65–75% are cured or improved and some 25–35% remain unchanged. If we compare these data with the statement quoted above, we get the amazing fact that nearly as many recover without any treatment as with treatment. This apparent paradox indicates that either all our therapies are worthless or statistics are unsuitable for assessing therapeutic effects.

Hitherto we have tested the value of a therapy by determining what percentage of a given number of cases were cured or improved. This is, however, a misleading procedure, because the number included those which healed or improved spontaneously. We can assess the value of a new treatment only by determining how many cases it cured or improved out of the "one-fourth" which did not improve either spontaneously or by the usual therapies. Should such a case improve or recover—and especially if the improvement is quick and lasting—then we can be convinced that the change is not spontaneous but a result of the new therapy. To an experienced physician it cannot be difficult to select from his patients the cases suitable for testing, and I am sure that in the cases reported below there is no doubt about their belonging to this category. I thought it necessary to raise these considerations of method before proposing a new treatment for rheumatoid arthritis.

A young woman suffering for three years from rheumatoid arthritis became pregnant. In the third month of her pregnancy she recovered unexpectedly, though until then her disease had seemed incurable. Later on I saw another similar case: the patient twice became pregnant, and in both instances her illness stopped; but after childbirth it recurred. Similar cases have been observed by others, although naturally not in great numbers, because few women in such an invalid condition become pregnant. P. S. Hench (1938) collected from American medical literature the reports on the pregnancy of women suffering from rheumatoid arthritis. He found, from 1864 onward,

ten authors giving accounts of thirty-seven cases of pregnancy among twenty women. These twenty women improved to an astonishing extent during thirty-four of their pregnancies. The improvement, however, ceased some time after their delivery (9.4 months afterwards on an average).

The Method

I presumed as an explanation of this recurrence that pregnancy produces an unknown material which causes the improvement. Further, I assumed that this hypothetical material circulates in the blood of pregnant women and could be transfused and utilized elsewhere. On the basis of these conjectures I transfused the blood of pregnant women into persons suffering from rheumatoid arthritis. In each case I gave 300 ml. of citrated blood. I repeated this several times, according to the symptoms of improvement. To demonstrate my results—for the reasons outlined above—I did not choose the statistical method. Statistically, I got with this treatment the same result as with the other therapies—that is, of 28 cases 64% recovered or improved and 36% remained unchanged. But to meet what I said in the introduction to this account I selected those seemingly hopeless cases in which scientific treatment had so far yielded no result—cases, therefore, which undoubtedly belonged to the “one-fourth” who became “progressively worse.”

I would call attention especially to two facts. First, the speed with which the improvement took place. Compared with the months or years needed to effect an improvement with gold therapy—which seems to be the most efficacious method at present—the improvement in our cases came with dramatic suddenness. Secondly, the lasting effects of the improvements. Patients Nos. 2, 3, and 6 remained healthy up to the time of writing (1946), and have not relapsed. They feel the changes in weather conditions, and during menstruation their joints are sometimes sensitive, but a real relapse has not occurred. Patient No. 4 committed suicide in 1944, for fear of the persecutions. Patient No. 1 was killed in 1944 by the Nazis. Until their deaths both had been free from symptoms.

Not all cases react equally well to these transfusions. We are discussing a disease of which the exact pathogenesis is unknown to us; we do not even know whether it is a homogeneous illness or a group of substantially different diseases showing only similar clinical features. So long as we are unable to differentiate the subspecies and determine in advance which case will improve by this method, we have to be satisfied with the fact that there are some cases of rheumatoid arthritis which can be promptly and permanently cured by the unknown material circulating in the blood of pregnant women.

Case Reports

Case 1.—A married woman aged 41 first had the disease in 1938, without fever, and within two months all her joints were affected. Mitral insufficiency was present. The sedimentation rate was 50 mm. Except for the hips, all joints were swollen and painful. Her moving and walking capacity was limited. The simplest actions—dressing, washing, getting up—could not be performed without help. The tonsils and dental abscesses were removed. No treatment brought any improvement. She was given 300 ml. of blood from a pregnant woman on Jan. 1, 1941. Chills and a temperature of 100.8° F. (38.2° C.) followed. Next day the improvement was surprising. She regained her power to move and the pains ceased almost completely. She got up, dressed, put on her shoes by herself—actions which she had been unable to do for months—and in her exhilaration began to knead bread, although the day before she had been unable even to button her dress. The improvement achieved on the first day was lasting, and slowly increased. Several trans-

fusions were given during the following years. All improvements proved to be lasting. She was able to walk long distances, to work, and to run her house. During menstruation her joints were somewhat sensitive. Until her death in 1944 there was no relapse.

Case 2.—A 25-year-old woman first had arthritis in 1933. All her joints were progressively affected, and fever was present. In 1939 she had pneumonia and myocarditis. Before the transfusion she was for four months under hospital treatment for polyarthritis. Except for her hips, all her joints were affected and she was completely disabled. The sedimentation rate was 50 mm. The first transfusion of 300 ml. of blood from a pregnant woman was given on Feb. 17, 1941. Chills and a temperature of 103° F. (39.4° C.) followed, but next day there was improvement, especially in the joints of the upper limbs. The pains diminished substantially, and the joints became free. A little later the improvement reached the joints of the lower limbs, and she steadily improved. Several transfusions were given, but after the first she was completely healed, was free of pain, and was able to work.

Case 3.—A 32-year-old dressmaker had polyarthritis gravis. Her illness began in 1931, in her knees and wrists, with fever. During the next ten years the disease spread to all her joints, mostly with feverish attacks. Since 1939 the disease had grown rapidly worse. The feverish periods were more frequent and longer. In September, 1939, she had myocarditis. Since 1939 she had been in hospital five times and when I first saw her she had been in hospital for eight months. She was completely crippled, could not walk, move, or work. In the last months she could not even leave her bed. The sedimentation rate was 50 mm. On March 29, 1941, a transfusion of 300 ml. of blood from a pregnant woman was given and she felt better the same day. The improvement increased during the next days. The pains diminished, the joints became freer, and on the fifth day she walked round the ward for the first time in five months. We repeated the transfusion several times. The improvement continued. She is practically cured, and is able to earn her living again. Up to the time of writing (1946) she has had no relapse.

Case 4.—A man aged 66 had been ill for four years, with feverish attacks. Treatment had not helped him, and the polyarthritis progressed irresistibly. He suffered severe pain and was unable to get up or to turn over in bed by himself. His gait was very clumsy and his appearance was Parkinson-like. He had to be washed and dressed. For three months he had been under hospital treatment. The sedimentation rate was 58 mm. On April 9, 1941, a transfusion of 300 ml. of blood from a pregnant woman was given. The upper limbs became more active on the next day, his bearing straightened, and his gait was easier. His condition improved rapidly and progressively. He felt stronger and healthier in general, and left hospital substantially improved. I saw him two months later, when he was completely cured.

Case 5.—A woman aged 48 had had polyarthritis for ten years. Except for the hips and knees, which were painful, all her joints were swollen and their active or reflex movements limited. The sedimentation rate was 25 mm. A transfusion of 300 ml. of blood from a pregnant woman was given on June 2, 1941, and fever followed. The first signs of improvement were observed on the sixth day. She gradually improved, the pains decreased, the swellings were reduced, and movements and walking were better. The transfusion was repeated, and she left the hospital in a painless, active state.

Case 6.—A woman aged 29 had ischialgia in 1937. Polyarthritis began in April, 1940, and gradually affected all her joints, but there was no fever. When I first saw her all her joints were more or less affected, deformed, swollen, and painful. She could walk only with great difficulty and was unable to work. The sedimentation rate was 40 mm. On July 8, 1941, she received 300 ml. of blood from a pregnant woman. Improvement began on the sixth day. After several transfusions the pains ceased. She has some sensitiveness to weather, but can move and work. Up to the time of writing (1946) she has had no relapse.

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