were four deep transverse grooves or folds in the skin of the lumbar region. The roentgenogram, which was unusually clear, showed a normal conformation of the spine excepting in the lower lumbar section, where there was a sharp curve forward or extreme hyperextension. The lateral view showed definitely that the individual vertebrae were normal in outline and that there was no luxation of any vertebrae or spondylolisthesis. A roentgenogram of the gastro-intestinal tract showed that region to be entirely negative. There was no spina bifida or other congenital malformation. The other joints were normal, particularly the hips, which were carefully investigated for any possible contracture or dislocation. There was, however, limitation to hyperextension of the hips. There was moderate outward bowing due to the fracture at birth of the left thigh. The abdomen was large and tense. The liver was felt several fingers' breadths below the free costal border. There was no other mass to be felt. Very slight pressure on the abdomen produced discomfort. The abdomen had on a few occasions been observed to be quite flaccid and much smaller in size, but at no times did the anterior curvature of the spine seem reduced. In the belief that the apparent distention of the abdomen might have something to do with the curvature of the spine, rectal tubes were inserted. Each time the child was relieved of considerable flatus, but on no occasion was the size of the abdomen or the condition of the spine altered. The urine, examined on two occasions, showed no albumin. A neurologic examination made by Dr. William Sharpe was reported to be negative.

Anterior curvature of the lumbar spine, or lordosis, is either primary, that is, congenital, or secondary. There was no condition present in this child such as contracture at the hips, congenital dislocation of the hip, etc., to which the lordosis might be a sequel, and as the condition was observed in the first few weeks of life and was then very resistant, we are warranted in considering this a genuine congenital deformity.

A review of the English literature reveals only scant reference to it. There is no mention of this condition in the *Transactions of the American Orthopedic Association* from 1890 up to date. Dr. Royal Whitman¹ says of this lesion, "It is not a simple postural deformity but it is usually secondary to disease or deformity either of the spine or adjoining members." Bradford and Lovett, and other modern writers similarly refer to this condition only as secondary to other deformities or lesions.

A few of the older authors, however, do speak of anterior curvature of the spine as a primary congenital lesion. Adams, in his "Lectures on Curvature of the Spine," says, "In the lumbar region, it is found as a peculiarity in the natural conformation of the individual, often existing in several members of the same family and hereditary." Brodhurst, in his book on "Curvatures of the Spine," says that anterior curvature of the spine may be congenital, and as such an affection it is combined with monstrosity and with spina bifida.

In our case, it would appear that there can be no doubt that the lesion is not secondary to any other condition and that it was present at birth.

CONCLUSIONS

1. This is a genuine instance of congenital lordosis or anterior curvature of the spine.
2. Heredity plays no rôle in this patient, as no member of either branch of the family has a like condition.
3. Despite the marked lordosis, there is no albuminuria.

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1. Whitman, Royal: *Orthopedic Surgery*, Ed. 4, Philadelphia, Lea & Febiger, 1910.

A CASE OF SPONTANEOUS RUPTURE OF THE MALARIAL SPLEEN

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History.—C. W. entered the Twenty-Third General Hospital, British Expeditionary Force, France, with the following history: He had had no special illness during childhood, and no history of any specific infections. He went to India the latter part of February, 1912. He was perfectly well until some time in August of the same year, when he was taken suddenly ill with cramps over the entire abdomen, followed a few hours later by an attack of dysentery. He had no nausea or vomiting. After forty-eight hours he was admitted to the hospital, where he remained for two weeks.

For the first twenty-four hours he was on the bed pan continuously. The stools were of a bloody mucous character. After treatment was instituted, the patient began gradually to improve, and at the end of two weeks he made an apparent recovery. During this time he lost considerably in weight. After being up for one week he was taken suddenly with chills, which gradually grew worse, and would last from five to fifteen minutes. The chills came on regularly, one slight chill during the day and a severe chill during the night. After two days of treatment the chills disappeared, and in three weeks the patient was discharged from the hospital. After his discharge he went back to his battery, and was perfectly well until October, 1914, when he returned to England. While on board the transport he was again taken sick with chills and fever. Treatment was immediately instituted and he made an apparent recovery in a few days. After landing he was taken with vomiting, which was very severe and lasted for two days. He had no pain, dysentery, or fever. After the vomiting ceased he felt well again, and began to gain in weight until May 8, 1915. While at the front in France, after a severe bombardment, he was taken sick with some nervous trouble, which lasted for a few days. He had several of these attacks, and was finally sent to the convalescent camp, where he remained for two weeks, making a complete recovery. After returning to his battery he was in the trenches until Aug. 13, 1915. There is no history of his having suffered any injury.

Aug. 13, 1915, he was taken sick with chills and fever, headache, malaise and pains in his abdomen and chest. This lasted for three days, when he was admitted to the casualty clearing station. After being put to bed and treated, he began to feel better. His temperature and pulse were normal. He remained here for six days, when he was removed to the Twenty-Third General Hospital. While on the train he was taken with severe pains in the epigastric region, which finally extended over the entire abdomen. On arrival at the hospital, his temperature was 97, pulse 70, respirations 18.

Physical Examination.—The patient was emaciated, the skin flabby, and he appeared anemic. His respirations were slow, but shallow. The excursions of his right chest were not so great as those of the left. On percussion a dull area was made out over the lower right side of the chest extending as high as a line drawn from half an inch above the nipple through to the back. The vocal fremitus was decreased over the area, and the breath sounds were diminished on auscultation, but not entirely absent. Breath sounds were normal above this dullness. The left side of the chest showed normal breath sounds, although it was hyperresonant on percussion. The heart's dullness was crowded to the left of the nipple line, and the apex beat was 1 inch to the left of the nipple line in the fourth interspace.

The abdomen was slightly distended but soft, and there was no muscular rigidity. The patient was very tender over the region of the gallbladder, especially toward the epigastric area. There was some tenderness over the appendix region.

While in the Twenty-Third General Hospital, the patient suffered from acute attacks of pain simulating gallstone colic.

The pain, however, extended to the left upper hypochondriac region. He suffered three or four attacks daily. The temperature ranged from 101 to 102. August 25 he had a slight chill, the pulse varying from 80 to 102, and the respirations from 18 to 22. He complained of no pain in the chest. During the night of August 25, he had a very severe attack of pain in the epigastrium, his temperature dropped to 97.4, and his pulse rose to 120, and respirations to 26. The patient was in collapse. An examination of the blood showed a leukocyte count of 10,500 with 55 per cent. of polymorphonuclears, 40 per cent. of small mononuclears and 5 per cent. of large mononuclears. No plasmodia were found.

Operation.—On the following morning an exploratory laparotomy was done. Under ether anesthesia, the abdomen was opened in the right upper quadrant through a rectus incision, and a large amount of old clotted blood appeared, and also a considerable amount of dark fluid blood. The liver was slightly enlarged and of normal consistency. There were adhesions between the parietal peritoneum and the liver, and also adhesions of the omentum to the liver. The gall-bladder was easily emptied, and no stones were felt.

The stomach was congested, but otherwise normal. The spleen was enlarged and quite soft. The omentum was firmly adherent to the convex surface of the spleen. The adhesions between the omentum and the spleen were not broken up.

The pancreas was normal; a few mesenteric glands were enlarged. The appendix was firmly wrapped with omentum and was club-shaped. The omentum was adherent to the intestine, and was infiltrated with dark blood forming hemorrhagic areas. The appendix was removed. No localized point of hemorrhage was found.

A drain was inserted through a punctured wound in the right iliac fossa, and another inserted through the upper wound. The patient was returned to the ward in a fair condition. He improved until August 31, when his temperature suddenly rose to 105, pulse 120, and respirations 40.

On examination, his abdomen was found to be soft, and the wounds in good condition; there was no tympanites. Examination of the chest showed a consolidation in the middle and lower lobe of the right side over which bronchial breathing and râles were heard. The vocal fremitus was increased.

Diagnosis of "lobar pneumonia" was made. The patient had his crisis on the seventh day, when his temperature remained normal for two days.

Then he began to have daily chills and elevations of temperature. An examination of the blood showed the malarial plasmodium. Quinin was given. From that time on he made an uneventful recovery—his wounds healed slowly, and he was discharged to England September 26, with a small sinus still persisting in both incisions.

Diagnosis.—A positive diagnosis of the origin of the hemorrhage was not made at the time of the operation, although the various causes of interabdominal hemorrhage were considered, as hemorrhagic pancreatitis, ruptured spleen, etc. Exploration failed to reveal any apparent cause for the hemorrhage, except from the enlarged soft spleen with the adhesions of the omentum to the convexity of the organ. These were not broken up, as they were already effectually checking any hemorrhage that might have come from this source. Malaria was considered at this time on account of the previous history, but an examination of the blood previous to operation did not reveal the malarial organism, nor did the smears taken from the free blood in the abdominal cavity reveal any organism.

But the chills and fever and the finding of the plasmodium during the convalescence of the patient make a diagnosis of malaria certain. This, when taken into consideration with the attack of severe epigastric pain while the patient was en route to the hospital, and the subnormal temperature on the day of admission, and again the attack of pain two days later with a drop in temperature and collapse, and the negative findings of the abdominal organs at the time of operation with the exception of the spleen, make it evident that we were dealing with a case of malaria complicated by a spontaneous rupture of the spleen.

REPORT OF TWO HAY-FEVER CASES TREATED WITH THE POLLEN EXTRACT

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CASE 1.—Child, aged 11, came, Aug. 20, 1915, for treatment for relief from hay-fever symptoms. There was a history of one similar attack the previous season. Family history was negative. The child was not of strong physique, but physical examination showed no special defect except anemia. Nasal examination revealed the anterior ends of the inferior turbinates puffy and covered with a thin watery discharge, causing complete obstruction. The symptoms were sneezing, a constant watery secretion from nose and eyes, dark circles under the eyes, itching mucous membranes and insomnia. The mother was advised to send the child away, which was done, but no good resulted from it.

September 10, the ragweed and goldenrod pollen skin reaction was tried. There was a severe reaction to both. Two days later the ragweed pollen extract in a weak solution was given by hypodermic, according to the technic of J. L. Goodale (*Pollen Therapy in Hay Fever, Boston Med. and Surg. Jour.*, July 8, 1915). For two days there was a local swelling and a tenderness at the point of injection, as well as a swelling of the whole arm from elbow to shoulder. The hay-fever symptoms disappeared, and there was no return, so there was no necessity of repeating the treatment.

CASE 2.—E. F., man, aged 21, referred for hay-fever treatment, July 27, 1915, had had hay-fever attacks of severe nature occurring each year beginning about the middle of August. A college roommate who also had hay-fever told him that he had been cured by vaccine treatment, and the patient wished to try it. The family history was negative. The present condition was excellent; the patient was well developed and athletic. Nasal examination made the last of July was negative except for a slight fullness and watery discharge which had been of a few days' duration. The throat and pharynx were in good condition.

A culture was taken from the nose and throat for autogenous vaccine. The growth contained staphylococci and a few pneumococci. During the first two weeks of August four vaccine treatments were given. The slight congestion and the watery discharge disappeared after the first treatment. At the time when hay-fever symptoms were expected, the patient, following his usual custom, left his home in Connecticut for New Brunswick where he had never been troubled, but because of business returned in two weeks. On reaching Boston, August 27, the symptoms began, sneezing, itching mucous membrane, watery discharge from nose, and insomnia, with increasing severity. Three vaccine treatments were given, one each on August 31, and September 3 and 9; on the latter date the ragweed and goldenrod pollen extract skin reactions were tested on the arm. Both reacted, but ragweed more, giving a good-sized white welt surrounded by an erythema about the size of a half-dollar.

September 14, the ragweed pollen extract in weak solution was injected by hypodermic. That night there was a severe reaction, asthmatic in nature. The local reaction was also severe, the arm swelling from elbow to shoulder. The asthma and local symptoms subsided in three days. Nasal examination revealed only one of the hay-fever symptoms remaining, a slight congestion of the inferior turbinates with lack of perfectly free breathing space through the nose. No further treatment was given and there was no return of the symptoms.

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A Governmental Function.—No one, in a free country, can force a diseased individual to seek effective treatment or prevent him from using an ineffective treatment, unless his disease imperils the health of others. At that point, and not before, the government can and should take personal measures. However, it is a well recognized function of the government to protect individuals against their own ignorance. It does this when it forces the child to go to school; it does this when it places the swindler in jail.—Editorial in *Cleveland Med. Jour.*