

REPORT OF AN EPIDEMIC OF INFANTILE PARALYSIS.

J. W. MCCREERY, M. D., WHITEMORE.

Anterior poliomyelitis acuta is an acute febrile disease, characterized by early paralysis, of one or more extremities, and rapid atrophy of muscle groups in the infected limb. It is a disease so common to childhood that it is more often termed infantile paralysis.

Pathology: (Pierce) this is an acute inflammation of the multipolar cells in the anterior horns of the grey matter of the cord, usually in the dorso-lumbar regions. Following the inflammation there is found a degeneration of the multipolar cells, overgrowth of connective tissue and molecular "debris." Also degeneration of the nerves coming from this particular segment of the cord, with atrophy and fatty degeneration of the muscles, supplied by them.

Etiology: It is a complication of a large number of diseases of

an infectious nature which are common to childhood. Traumatism is often given as a cause, I believe that a large number of writers of today, are decidedly in favor of the theory of the microbic origin of the disease, but as yet no positive claims are made as to the specific germ.

In July, August and September, 1908, I was called upon to treat my first cases of infantile paralysis and will give a brief report of each case.

*Case 1.*—July 29th, called to see twins aged 16 months, symptoms fever 102 and 102 3-5; pulse 140 and 145; respirations 22 and 24; vomiting, diarrhea, furred tongue, tympanites, abdominal tenderness, and pain on attempts by mother to take them out of their crib. Sanitary conditions very poor, diet had been mostly milk, but a few days previous they had been allowed to eat a small portion of a green apple, diagnosis of acute intestinal infection was made, and treated as such by calomel, soda and bismuth, the cases were reported much better in a few days, and did not hear from them for a week, or ten days when father reported that the one which had been least sick was very week and was unable to move his arms or legs.

I called to see the little fellow and found he had almost a complete paralysis of both legs and one arm.

Massage and hypophosphites prescribed, present condition eight months later. general health good, improvement of arm considerable, very slight ability to abduct one thigh, slight movement of the toes on that side. the opposite leg inert.

*Case 2.*—Female aged two years, had been having fever, vomiting, diarrhea, and pain when mother would move her. The acute symptoms had subsided when I saw her, (about the 4th day of her sickness). There was an inability to stand upon the feet as one leg would give way under her. I found that there was a hyperextension of the knee joint and toe dropped.

Diet and sanitary conditions, were good in this home, present condition following massage for the past seven months, considerable improvement child able to walk with but slight limp. There is some overextension at the knee and slight toe drop.

*Case 3.*—Female aged five years, temperature 103, pulse 130, respirations rapid, delirium, vomiting, bowels constipated, abdominal tenderness, headache and pain on moving legs, sanitary conditions poor, diet coarse and improperly cooked. Treated as an acute intestinal infection, acute symptoms subsided in two days but patient had flexion of one leg, and unable to stand on it. Extension of leg gave her intense pain about the knee and extending to the hip, her general health improved rapidly, but in a short time she had a marked valgus-calcaneus. She was sent to Dr. Cokenower for corrective brace, he reported her as having some neuritis due to "Wolf's law or malposition" which caused pain to the knee and hip.

Present condition two months after corrective appliance, in use, very slight improvement. In this same family I treated two boys younger than this same patient, taken ill at the time she was. Their symptoms were more severe than hers, but in forty-eight hours they had completely recovered without any paralysis.

*Case 4.*—Male aged three years, had been having Pertussis, and about recovered from it, sanitary conditions first class and diet correct,

found him with symptoms as follows: fever 103, pulse 130, respiration 24; delirium, vomiting, abdominal tenderness, tympanites, general diffuse pain of body made worse by attempts to move him. Acute symptoms abated at the end of 48 hours but was unable to move one limb, and would complain of severe pain when it was extended. He remained in nearly the same condition for about three weeks, when improvement began and had continued, and now at the end of eight months, he has almost completely recovered full power of the leg. There is just a slight inability in the anterior tibial group, which allows slight toe drop.

*Case 5.*—Female aged eleven months, brought to my office August 17th had been having a few days previous slight fever, vomiting, restless, no desire to take nourishment. Acute symptoms had abated when she was brought to me but was unable to move the left leg, and would cry when it was extended. Under treatment she improved for a few weeks, when she contracted pertussis, and during its course there was no improvement. After recovery from pertussis improvement of the leg began and has continued, and at the present time the patient is walking with a slight talipes calcaneus which is so slight that I believe at this time that no appliances will be necessary.

*Case 6.*—Male aged two years, brought to my office with history of having had fever, vomiting, diarrhea and restlessness, a few days previous, these symptoms had cleared up but he was unable to move one of his legs. This child had never walked, or talked and his hearing was very poor, he was taken to Dr. Dean's clinic and had adenoids and tonsils removed.

There has been an improvement of general health, but very small increase of hearing, and no improvement in speech. He is beginning to stand on his feet but will not attempt to walk, in his case there is paralysis of tibialis anticus and peroneus.

*Case 7.*—Female aged five years. Called to see her September 4, 1908, she had been having fever, vomiting, diarrhea and considerable pain in back of head and neck. She had an operation for mastoid abscess nine months previous to this time, and completely recovered from that infection.

She had a paralysis of the extensor communis digitorum and to some degree the supra-spinatus she has improved considerably and at the present time, there remains a small degree of Digit flexion.

*Case 8.*—Male aged three years, and (case 9) male aged ten years. Both of these cases were brought to my office, with paralysis of anterior tibial group, each one of these cases gave a history of having had fever, vomiting, diarrhea and head ache lasting one day and inability to use leg on following day, both of these cases have improved but still have paralysis of the tibialis anticus.

After my experience with these nine cases I am inclined to believe, that infantile paralysis is not contagious for the following reasons:

First, that there was no communication between any of the above cases, and no way by which contagion could be traced from one home to another.

Second, that in all of these families, there were small children other than those affected and in three of the nine families, I treated other children for the intestinal infections, who did not have paralysis follow.

I believe that infantile paralysis is a complication of intestinal infection, but as to whether by direct bacterial invasion of the anterior motor cells or by toxin influence on circulation, of cord, I am unable to confine my theories.

Treatment: Baths during the early stage, are beneficial for the reduction of temperature and effects on circulation; the use of calomel early, and also of other intestinal antiseptics is to be urged. It is possible that applications of ice or counter irritants to the spine, may do good but I am unable to understand why? I do not know of any medicine that will lessen degeneration in the anterior horns. I think that strychnin is very good in after treatment of the disease. Massage is the best agent we have for the treatment of paralysis and should be used for years also muscle training should be used with the massage. Electricity is over estimated in the treatment of this disease. In the treatment of deformities corrective means should be used early to do good.

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