

prime movers have an additional action that is not wanted in the particular movement to be executed. For example, the biceps is the chief supinator, but it is also a powerful flexor, and when supination without flexion is done the triceps contracts as a synergic muscle and counteracts the flexion of the elbow by the biceps. The relations between the prime movers and the synergies are very close, and apparently the brain has no power to moderate the impulse sent to the latter to make them act proportionately to the weak prime movers in case of their paresis or paralysis, hence, we have in such cases movements other than those desired. Lastly, we have the fixation muscles fixing the joint when such fixation is made necessary by pressure or displacement. A certain amount of stress on the joint is required to call these into action. The antagonists to the prime mover muscles are relaxed under normal conditions, except in case of some unopposed movements which are required to be suddenly stopped, but in certain cases of functional paralysis this inhibition of the antagonists may fail, and Beevor considers their contraction as a symptom of functional as opposed to organic disease. It also occurs, however, in tetanus and from the toxic action of strychnin, which, according to Sherrington, "change the reciprocal inhibitions, normally assured by the central nervous mechanism, into excitations." Beevor considers all the physiologic evidence to be in favour of the location of the linkage of the ultimate co-ordination of movements being in the spinal cord, and that most probably this nervous mechanism is situated in the cells of the posterior cornua, where, as shown by von Monakow and Schafer, the pyramidal fibers end, instead of the anterior horns, as was formerly supposed. Whether this mechanism is the same as that used for reflex movements, he considers uncertain.

OSTERHAUS, K. "Nerve Anastomosis in Infantile Paralysis," *Medical Record*, July 11, 1908.

Osterhaus says that a great deal of the deformity which occurs in infantile paralysis could be prevented by early treatment of the acute stages of the disease tending to limit the area involved, and by fixation of the limb in a normal position when the acute symptoms have subsided. Later these deformities require some form of operation to correct them, such as tenotomy, myotomy, tendon and muscle transplantation, astragalectomy, arthrodesis, or osteotomy. All of these procedures are of value in selected cases. The attempt to cause innervation of the paralyzed muscles by connecting them with a healthy nerve is of great value. This operation can do no harm, and in many cases does much good. End-to-end anastomosis of split-off segments of the two nerves promises the best results by means of closer union. Massage and electricity should be used after the operation to aid in regeneration of function of the affected