disappear entirely, but as a rule complete paralysis is left in one extremity, most frequently in the leg or in some groups of muscles of the leg, generally those on the anterior and external aspect, viz., the common extensor of the toes, the peronei muscles and the tibialis anticus, giving rise to talipes equino-varus, the deformity most commonly met with as the result of this form of paralysis.

In paralysis of the muscles of the calf, on the other hand, the deformity will be of the calcaneus variety.

Most of the authors that I have consulted, ascribe these deformities to the contraction of the muscles antagonistic to those which are paralyzed; and the treatment or the prevention of these contractions and deformities appears to me to be of such moment, that I trust I may be excused if I quote what is said by Eustace Smith on the subject in his own words: "One of the most important and characteristic results of the disease consist in the paralytic contractions, which almost invariably occur when muscles are permanently disabled, and constitute various kinds of deformity. They are especially common in the feet, and are the principal cause of the different forms of club-foot, which develop in the child after birth. The contractions occur, not in the paralyzed muscles as a rule, but in those which still retain their contractile power. They begin early and tend to increase as time goes on. This contraction of unaffected muscles, or of muscles partially affected, was attributed formerly to the influence of a so-called muscular-tonus."

It was supposed that a constant stimulus proceeded from the spinal cord, and kept all the healthy muscles in a state of slight contraction. In the normal condition, it was said, opposite muscles neutralize one another; but if the muscles become paralyzed on one side so that the contracting pain on that side is abolished, the limb is drawn to the affected side by the action of the tonus in the unaffected muscles.

This theory was combatted by Werner, who maintained that the contraction could be explained without recourse to the imaginary tonus. He asserted that when one set of muscles was paralyzed there is no deformity until the opposite set of muscles is put into action. The limb is then drawn to that side and cannot be replaced by the paralyzed antagonistic muscles. It therefore remains in its new position until replaced, or until it falls back again by its own weight. Consequently it must happen that the limb is often and long in one position, for the muscles, once contracted, remain so, because the antagonistic muscles can no longer act. After a time they lose the power to relax, and a permanent contraction becomes gradually established.

Volkman and others, however, have pointed out that the deformities are only partially caused by the inability of the paralyzed muscles to oppose the contractions of the healthy muscles They believe the most important factors to be the weight of the affected limb itself, and the greater pressure thrown upon it when in use.

Talipes *equino-varus*, the most common deformity in the lower limb, is just the position the foot takes when the ankle-joint is not acted on by its muscles. If a child has not walked this is invariably the deformity we meet with. The foot naturally falls into this position, and the shortened, flabby muscles, in course of time, become permanently fixed in this position.

The growth of bone, too, being arrested, the affected limb is shorter than its fellow, and the child is compelled to point its toes towards the ground, all tending to produce the same deformity.

According to the same author, if the paralysis occur in a child who has already learnt to walk, talipes-valgus is the deformity he may expect to meet. The child brings its weight to bear on the sole placed flat on the ground; the foot being no longer steadied by the paralyzed muscles curves outward until the ligaments are made taut; these in time become stretched and the foot fixed in this position.

This form of talipes-valgus, however, is not so complete as that caused by over-exercise and fatigue, for, when the weight is taken off the limb, the foot naturally falls into the equino-varus position; and the weight of the foot itself, acting as a counterpoise to the affected muscles, draws them back to the normal position.

Strümpell is in accord with Volkman on this point, believing that weight and pressure are prominent factors in causing the various deformities met with. He says: "After the paralysis has existed for a long time, certain secondary contractions almost always develop in the para