

TREATMENT OF RESULTS OF INFANTILE SPINAL PARALYSIS.

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THE great advance made in surgical methods is nowhere better illustrated than in the treatment of the deformities and disabilities resulting from anterior poliomyelitis. While the prevention of deformities by early application of apparatus has been advocated and practiced for a long time, it is only within recent years that any attempt has been made to rearrange the attachment of active muscles so as to permit of them being used to the greatest mechanical advantage.

The treatment of such deformities and disabilities will be briefly considered under four heads, and illustrated by cases from the notes of the writer. In the consideration of these cases one speaks most largely of paralysis affecting the lower extremity, because the surgeon is consulted so much more frequently for relief of deformity or establishment of increased function, of the lower extremity than of the upper.

I. CASES WHICH MAY BE TREATED BY MECHANICAL SUPPORTS.

In the lower extremity one finds numerous cases with paralysis of all the muscles, sometimes including the adductors and glutei, which produces a flail like or uncontrolled limb.

No surgical procedure seems feasible in such cases. In order to gain a firm base of support one would have to produce ankylosis at hip, knee, and ankle, and the obvious disadvantages of such a course would more than overbalance the advantages. It seems then that this class is best treated with a mechanical support which takes somewhat the form of an artificial limb with a core of bone throughout. The support is preferably fastened to the foot and extends as a side box up each side of the leg, a leather lacing enveloping calf and thigh. The joint at the ankle may be a free joint or a stop joint, set to prevent toe dropping below the right angle. The knee joint should be an automatic lock joint, that locks itself when patient stands, and can be loosened by pressure on a spring, through the clothing, so leg can be flexed when patient sits down. The support may end at the perineum or be continued to a pelvic band, with a free joint at the hip.

This form of support will usually enable one, who has hitherto been obliged to use a pair of crutches, to get about with the assistance of a cane. The mechanical support may be used also in those cases where