Multiple Sequential Stereotaxic Surgery for Cerebral Palsy

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Abstract

The increasing safety and benefit shown from symmetrically bilateral simultaneous stereotaxic surgeries for cerebral palsy has suggested combining the benefits of lesioning multiple areas in the same patient. Unilateral dentateotomy helps to relax the spasticity of infantile spastic hemiplegia. Bilateral simultaneous dentateotomy as suggested by Fraioli and Balasubramaniam has increased the benefit for cerebral diplegia over that derived from unilateral staged destruction of both dentate nuclei. Bilateral simultaneous posterior thalamotomy which includes portions of centrum medianum and pulvinar provides good relaxation of the lower extremities and trunk in the spastic cerebral palsied child who has little or no voluntary or involuntary movement. Choreoathetoid quadriplegic cerebral palsied patients obtain some benefit from each of these procedures primarily in trunk stabilization. They do not obtain as much improvement in extremity control as those whose problem is primarily spasticity without much involuntary movement. Recently lesions in the putamen (putamenotomy) have improved voluntary control and decreased athetosis of the upper extremities. These procedures have been used in a variety of sequences.