

TITLE:

Incidence of Cerebral Palsy in Children with Congenital Heart Disease

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RESEARCH PROJECT DESCRIPTION**Background**

Children with congenital heart disease are at risk for neurodevelopmental delays. These delays may be a result of an aberrant control of movement and posture, appearing early in life secondary to a central nervous system lesion or dysfunction that is not a progressive or degenerative disease. This is known as cerebral palsy. The general incidence of cerebral palsy in the pediatric population is 2 to 2.5 per 1000 live births. The incidence of this disease in children with congenital heart disease is not known. This study aims to determine the incidence of cerebral palsy in this population. We will also analyze variables associated with pre-operative, peri-operative and post-operative management in an effort to identify modifiable variables.

Specific Aims:

Determine the incidence of cerebral palsy in children with congenital heart disease

- a. Determine type of cerebral palsy
- b. Etiology of CP
- c. Type of congenital heart lesion more affected
- d. Incidence of hypotonia that is not cerebral palsy
- e. Utilization of rehabilitation for treatment

Research Plan:**Experimental Methods:**

Retrospective chart review of children from 2011 till 2016 with a diagnosis of congenital heart disease and either cerebral palsy, spastic quadriplegia, spastic diplegia, spastic hemiplegia, hypertonicity, muscle hypertonicity, hypotonia, and congenital hypotonia. Diagnosis will be identified using both ICD-9 and ICD-10 codes. Population will include all children under the age of 21 years.

Measureable outcomes:

1. Determine incidence of cerebral palsy in children with congenital heart .
2. Determine incidence of hypotonia not cerebral palsy resulting in developmental delay.
3. Determine types of congenital heart defects associated with cerebral palsy

Role of medical student

Chart review, data analysis

Funding

Applications for grants have been submitted.