Congenital Malformations of the Brain and Spinal Cord

The word *congenital* means that something happened while the baby was still in the womb during pregnancy. *Malformation* means that a part of the body did not develop properly. A congenital malformation of the brain and/or spinal cord occurs when the brain and/or spinal cord do not develop properly during pregnancy.

CAUSES

There are numerous causes of these problems. Even with thorough testing, a specific cause is often not found. The causes of the different congenital malformations may be grouped into several categories:

- *Hereditary* or *genetic* conditions. These are either passed down from one of the parents or can be caused by problems when the father's sperm and mother's egg are joined together.
- *Teratogens* or environmental exposures during pregnancy. These can include:
  - Medication/drugs taken by the mother.
  - Exposure to radiation.
- Infection in the mother during pregnancy.
- Blood clotting problems in the mother during pregnancy.
- Trauma to the baby during pregnancy.
- Hormonal problems in the mother during pregnancy.

SYMPTOMS

Children and adults with these disorders can have many different symptoms depending on the area of the brain or spinal cord that has been affected. Common symptoms include:

- Developmental delay/Mental retardation.
- Autism.
- Seizures.
- Visual Problems.
- Abnormal Muscle Tone.

TREATMENT

Treatments depend upon the symptoms.
For most congenital malformations, treatment is only symptomatic and supportive and may include:

- Therapy.
- Seizure medications.
- Special education in school.

The cause of the malformation can not usually be treated.
If the malformation is caused by a genetic problem, then genetic counseling will be beneficial.

Many disabilities are mild enough that patients can function normally. Others cannot function normally. Some infants, children, and adults may die. Others may remain totally or partially disabled.

Family support groups for many of the disorders are available.

Research is continually being done to learn more about each of the causes of congenital malformations of the brain and spinal cord.

Document Released: 12/08/2003 Document Re-Released: 03/14/2011
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