Encephaloceles

Encephaloceles are rare neural tube defects characterized by sac-like protrusions of the *meninges* (the membranes that cover the brain) and brain tissue through abnormal openings in the skull. The defects are caused by failure of the neural tube to close during the development of the fetus. *Symptoms* (problems) may include *hydrocephalus* (excessive accumulation of cerebrospinal fluid in the brain), spastic quadriplegia (paralysis of all 4 limbs), developmental delay, *microcephaly* (small brain), vision problems, mental and growth retardation, *ataxia* (uncoordinated or unsteady movements) or (lack of muscle control), and *seizures* (convulsions). Some affected children may have normal intelligence. Encephaloceles are often accompanied by craniofacial abnormalities or other brain malformations.

TREATMENT

Generally, surgery is performed during infancy to place the protruding tissues back into the skull, remove the sac, and correct the associated craniofacial abnormalities. Hydrocephalus may require a shunt. Other treatment is symptomatic and supportive.

WHAT WILL HAPPEN

The *prognosis* (likely outcome) for individuals with encephaloceles varies depending on what brain tissue is involved, the location of the sacs, and the accompanying brain malformations.

RESEARCH BEING DONE

The NINDS conducts and supports a wide range of studies that explore the complex mechanisms of normal brain development. The knowledge gained from these fundamental studies provides the foundation for understanding how this process can go awry and, thus, offers hope for new means to treat and prevent congenital (present since birth) brain disorders including neural tube defects such as encephaloceles.

Research is continually being done to learn more about this problem.

Provided by: The National Institute of Neurological Disorders and Stroke

Document Released: 12/08/2003

ExitCare® Patient Information ©2011 ExitCare, LLC.