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Original Article

Clinical Survey of Cerebrovascular Disease in Children

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Abstract:

Objective: Stroke is defined as the sudden occlusion or rupture of cerebral arteries or veins resulting in focal cerebral damage and clinical Neurologic deficits. The risk factors for stroke in children are numerous and differ from those in adults. Identification of these factors can prevent subsequent strokes. The aim of this study is to determine the etiology of stroke in children.

Methods: In this descriptive prospective study, children who were referred to pediatric neurology clinic in Mofid Children's Hospital due to acute hemiparesis during 2 years period (Sep 2003-Sep 2005) were evaluated and their diagnosis was cerebrovascular disorders, in the view of physical examination and brain imaging.

Findings: The study group consisted of 40 children in age groups between 3 months to 14 years old. The most common age group at presentation was 2 to 5 years old. Occurrence was predominant during autumn and winter (70%). The most common clinical presentations were acute hemiparesis (85%) and seizures (40%). The other symptoms were as follow: 15% decreased level of consciousness, 12.5% fever, 7.5% VI Nerve palsy, and 2.5% cerebellar signs. 20% of patients suffered from hemorrhagic and 80% had ischemic stroke. In 60% of the patients specific etiologic factors were identified and in the rest of the group, risk factors could be delineated. The most common etiologies were: 17.5% cardiac diseases or [procedures?]and 10% hematologic disorders. Other etiologies included: 7.5% prothrombotic states, 7.5% CNS infection, 5% mitochondriopathy, 2.5% for each of the head trauma, migrain, serum lipid abnormality, hypertension and arteriovenous malformation each of them. The most common risk factors is consisted of 40% anemia and 20% infections.

Conclusion: This study demonstrates that stroke in children is a multifactorial process. Identification of the underlying risk factors for cerebrovascular disorders is highly desirable because many of the risk factors can be prevented, resulting in reduction of the risk of subsequent strokes.

Keywords:

Cerebrovascular disorder , Ischemic stroke , Hemorrhagic stroke , Stroke , Children

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