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Mini Review

Differential Diagnosis of the Neonatal Seizures by Their Time of Onset

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Introduction

Seizures which occur in the first twenty-eight days of life of a full-term infant or in the forty-four weeks of gestational age in a preterm infant, define as neonatal seizures. Neonatal seizures incidence is about three in one thousand and the prevalence is about one and a half percent of live births [1-4]. The first to second day and up to the first week of life, is the most vulnerable time which seizures can be occurred at that. Neonatal seizures differential diagnosis is based on their time of onset. Subarachnoid hemorrhage, hypoxic-ischemic encephalopathy, falx or tentorial laceration due to trauma, intraventricular hemorrhage in mature infants, intrauterine infection, bacterial meningitis, pyridoxine dependency, drug affects, and sepsis can cause seizures to be occurred in the first 24 hours of birth. Drug withdrawal, subarachnoid hemorrhage, bacterial meningitis, cerebral dysgenesis, sepsis, cerebral contusion with subarachnoid hemorrhage, intraventricular hemorrhage in preterm infants, intracerebral hemorrhage, tuberous sclerosis, cerebral infarction and metabolic disorders can cause seizures which may be occurred in the period between 24 to 72 hours after the birth time [5-8]. Cerebral infarction, familial neonatal seizures, inborn errors of metabolism particularly organic acid disorders, intracerebral hemorrhage, tuberous sclerosis, cerebral dysgenesis and kernicterus can cause seizures which may occur in the period between 72 hours to one week after the time of birth. Cerebral dysgenesis, inborn errors of metabolism specifically organic acid disorders, encephalitis related to the herpes simplex, familial neonatal seizures and tuberous sclerosis can cause seizures which may occur in the period between one to four weeks after the birth time. Having knowledge about the differential diagnosis of neonatal seizures is of great importance to deal with such pathologies much more better during clinical practice.

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