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Risk factors of auditory neuropathy / auditory synaptopathy in children

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Background:
The diagnosis of auditory neuropathy/ auditory synaptopathy (AN/ AS) is often delayed and cannot made in universal hearing screening programs based only on TEOAEs. The aim of this study is to describe risk factors in AN/ AS in order to reveal patients based on an ABR and TEOAE screening early.
Methods:
Between 1997 and 2005 we diagnosed thirty-seven children with AN / AS. They underwent a critical chart review for risk factors and etiological coincidences in this idiosyncratic disorder.
Results:
This study explores a multitude of risk factors in thirtyseven children with AN / AS. Eighteen neonates had a history of prematurity and low birth weight. Hyperbilirubinemia was present in thirteen children. Three patients had evidence of infection during pregnancy, and AN / AS was associated with complex syndromal diseases in two cases. A congenital, familial pattern was seen in two siblings. Seven patients had idiopathic AN / AS.
Conclusion:
Rather than being a single etiological entity, AN / AS comprises a spectrum of risk factors and associated problems affecting the cochlea and the auditory pathway. This study shows that the majority of AN / AS in children is the result of perinatal problems and is not genetic in origin. Hyperbilirubinemia is a common and etiologically significant finding in infants suffering from AN / AS. Thus, early hearing screening for AN / AS including TEOAEs and ABR assessment among neonates having risk factors for AN / AS is crucial in order to better manage patients suffering from this disorder.