Neonatal seizures : A 2 years follow-up of 178 infants

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BACKGROUND :

Neonatal seizures (NS) are frequent. It's important to identify its cause, to start early management and to give a predicted prognosis.

The objectives of our study were to identify the etiologic profile and the predictors of neurodevelopmental outcome of NS in our neonatal intensive care unit (NICU).

METHODS :

From 1st January 2008 to 31st December 2013, 178 neonates were admitted in the NICU of Hedi Chaker Hospital of Sfax.

This study was a retrospective collect of data including first clinical presentation, neuroimaging findings and regular neurologic examination after discharge.

RESULTS :

❖ **Mean age of NS onset:** 40 hours.

❖ **Treatment :**

- Only Phenobarbital: 70%
- Phenobarbital then Phenytoin: 6 cases
- Phenobarbital then Clonazepam: 25%
- B6 vitamin: 9 cases

❖ **Neonatal mortality:** 25%.

Neurological examination at discharge	%
Normal	44
Abnormal	56

Follow up	%
Until 1 year old	57
2 years old	34
lost to follow up	9.7

❖ **Etiology of neonatal seizures**

Etiology	%
Hypoxic encephalopathy	63
Transient metabolic disorder	6.7
Neonatal infection (meningitis or sepsis)	5
Inherited metabolic disorder	5
Neonatal stroke	3

❖ **Evolution after NS**

Outcome	%
Epilepsy	7.3
psychomotor retardation	14.6
tone and motor disorder	17.4
Deafness	1.2
Language delay	5.7
Intellectual disability	21.7
Visual disorder	8.4

CONCLUSION :

After neonatal seizures, a poor long term outcome was noted in 39.3% cases. These complications were significantly associated with the length of hospital stay, the repetition of seizures in the neonatal period, the maximal dosage of clonazepam, the neuroimaging findings, electroencephalogram recording and the neurological examination at discharge. In our region, people must be aware about the importance of neurological follow-up after NS to insure early screening of several complications and their appropriate management without any delay.