EVALUATION OF THE RISK FACTORS, FUNCTIONALITIES, LIFE QUALITIES OF THE PATIENTS WITH THE DIAGNOSIS OF PEDIATRIC ACUTE ARTERIAL ISCHEMIC STROKE

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OBJECTIVES

We aimed to evaluate etiology, prognosis of patients who were followed up with diagnosis of childhood acute arterial-ischemic stroke.

METHODS

Clinical features, etiology of patients with acute arterial-ischemic stroke between 2010-2020, aged 1 month-18 years were retrospectively evaluated. At the last control, functionality (Barthel[1], Functional Independence Measure scores[2]), quality of life (SF36 scale[3]), motor results (gross motor function classification system) of the patients were recorded prospectively/cross-sectionally.

RESULTS

Forty children were included in the study (25 of whom male), current age was median 112.5 (3.6-294) months and the most common etiologic factor was prothrombotic state (Table-1). Of the 27 surviving patients, 29.62% had positive motor results. 29.62% of surviving patients were independent according to Barthel scoring (Table-2). In terms of quality of life, SF36 scores were found to be highest in pain and lowest in emotional role difficulty (Table-2). The most important factor affecting long-term mortality is the presence of valvular heart disease (Table-3).

Current age-months (med/IR)	112.5/3.6-294
Sex (male, n/%)	25/62.5
The most often risk factor (n/%)	Prothrombotic reasons (27/67.5)
The most often first presentation clinic (n/%)	Seizure (17/42.5)
Aphasia (n/%)	1/2.5
Hemiplegia (n/%)	16/40
Development of epilepsy (n/%)	24/60
Recurrence (n/%)	3/7.5
Acute/Long-term mortality (n/%)	6/15 13/32.5

Table-1: Patients' demographic and clinic qualities

A-Barthel Functionality Scale		
Fully independent (n/%)	8/20	Positive prognosis
Barthel score (Average ± SD)	68.0 ± 28.9	
B-WeeFIM Functionality Scale (Average ± SD)		
Motor	66.0±23.3	
Cognitive	28.6±8.4	
Total	94.5±29.8	
C-SF36 Life Quality Scale (Average ± SD)		
Pain	83.6±27.5	The highest
Emotional role difficulty	36.4±49.2	The lowest
D-Motor Outcomes with GMFCS (n/%)		
1	8/20	Positive

Table-2: Our patients' functionalities, life qualities and motor outcomes in prognostic terms

	Univariate OR (%95CI)	p	Multivariate OR (%95CI)	p
Valvular heart disease	5.3	0.02	268.2	0.04
Follow-up period	0.9	0.02	0.9	0.04
Wbc	1	0.01	1	0.03

* (reference category), Backward: Wald model was used in including the independent risk factors in multivariate model.

Table-3: The most important factors affecting long-term mortality

CONCLUSIONS

The most frequent etiology of pediatric AIS in our study was prothrombotic risk factors. Mortality rates were 15% in the acute period and 32.5% in the long term. The most important factor associated with long-term mortality was the presence of valvular heart disease. When the survivors were evaluated, nearly 30% were independent or had positive motor outcomes and 60% had epilepsy. İt is important to know the etiology, to evaluate the prognosis in order to plan effective treatment and rehabilitation.

REFERENCES

1) Wade DT et al. The Barthel ADL Index: a standard measure of physical disability? Int. Disabil. Studies. 1988;10, 64-7

2) Msall ME et al. WeeFIM. Normative sample of an instrument for tracking functional independence in children. Clinical Pediatrics 1994;33 (7):431–8

3) Jr JEW et al. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. Med Care. 1992;30(6):473-83