Predictive factors of recurrence in embolic stroke of undetermined source

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Introduction:

Embolic strokes of undetermined source (ESUS) represent a large subgroup of cryptogenic strokes with a presumed embolic mechanism and consist of non-lacunar ischemic strokes with no major cardiac source of embolism and no relevant large artery stenosis. This group is characterized by a considerable rate of recurrence. The purpose of this study was to identify predictive factors of recurrence.

Materials and methods:

We performed a descriptive, retrospective study covering a period of 6 years from January 2015 to December 2020 and including patients hospitalized for ESUS in the neurology department of military hospital of Tunis. We included patients with a non-lacunar cerebral infract and without proximal arterial stenosis or major cardio-embolic sources.

Results:

A total of 63 patients were enrolled. The average age of the patients during the stroke was 58 years with extremes ranging from 29 to 80 years. The average follow-up time was 18 months. Recurrent ischemic strokes occurred in 13 patients.

Age was identified as predictive factors of recurrence.

Hypertension which was the most common cardiovascular risk factor was identified as a factor of recurrence

Among the potential causes of stroke, we identified as predictive factors: mild heart valve diseases and wall motion abnormalities. the study of the radiological data showed that leucopathy and multiple or bilateral infracts on brain imaging were predictive factors of recurrence. (table 1)

Conclusions

Several factors of stroke recurrence in ESUS were studied, the data were contradictory. According to the data in the literature, age was the main factor predicting recurrence.[1] Studying cardiovascular risk factors identified hypertension as the main factor of recurrence. Regarding the potential causes of ESUS data were variables but the risk of recurrence was most often similar [2,3,4].

Bilateral infracts was also identified as predictive factor of recurrence [5].

The identification of predictive factors of recurrence allows the identification of a group of high-risk patients who should benefit from further etiological exploration in order to identify the etiology and to personalize the management.

Further studies are needed to identify predictive factors of recurrence in order to establish a well codified diagnostic and therapeutic management.

References:

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Table1: Predictive factors of recurrence in our study

	cases n (%)	Stroke recurrence n		statistical significance (« p »)
		No	Yes	
Hypertension	39 (61%)	28	11	0,013
Mild heart valve diseases	13 (21%)	6	7	0.003
multiples infracts	12 (19%)	5	7	0,002
Bilateral infracts	9 (14%)	3	6	0,002
Leucopathy	9 (14%)	3	6	0,002