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Title	Posterior Circulation Ischemic Strokes : Clinical, Etiological and Prognostic Features from A Single-Center Observational Study
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INTRODUCTION

Posterior circulation ischemic strokes (PCIS) diagnosis can be challenging due to wide range of clinical manifestations and suboptimal performance of computed tomography (CT).

Their etiological profile has been rarely studied.

AIM

Our aim was to describe the clinical, etiological and prognostic features of PCIS in a Tunisian cohort.

METHODS

- **Retrospective observational study** including patients diagnosed with IS.
- Their demographic, clinical, paraclinical and prognostic features were noted.
- A **comparative study** was conducted between PCIS group and IS affecting anterior circulation.

RESULTS

We included **218 patients**.

- PCIS accounted for 27.1% of cases (N=67).
- Table 1 summarizes the main findings of our study.

REFERENCES

[1] Olivato S, Nizzoli S, Cavazzuti M, Casoni F, Nichelli PF, Zini A. e-NIHSS: an Expanded National Institutes of Health Stroke Scale Weighted for Anterior and Posterior Circulation Strokes. J Stroke Cerebrovasc Dis. 2016 Dec;25(12):2953-2957. doi: 10.1016/j.jstrokecerebrovasdis.2016.08.011. Epub 2016 Sep 28. PMID: 27693107.
[2] Pierik R, Algra A, van Dijk E, Erasmus ME, van Gelder IC, Koudstaal PJ, Luitjckx GR, Nederkoorn PJ, van Oostenbrugge RJ, Ruigrok YM, Scheeren TWL, Uyttenboogaart M, Visser MC, Wermer MJH, van den Bergh WM; on behalf of the Parelsoer Institute-Cerebrovascular Accident Study Group. Distribution of Cardioembolic Stroke: A Cohort Study. Cerebrovasc Dis. 2020;49(1):97-104. doi: 10.1159/000505616. Epub 2020 Jan 21. PMID: 31962331.

Table 1 : Comparative Study of Posterior & anterior circulation ischemic stroke

	Posterior circulation ischemic stroke (N=67)	Anterior circulation ischemic stroke (N=151)	P value
Demographic features			
-Mean age at stroke onset (years)	60 ± 13.07	62.5 ± 13	0.286
-Sex- ratio (M/F)	2.5	1.5	0.118
Clinical features at admission :			
-Median NIHSS (IQR)	3 (4)	5 (7)	0.002
-Median Rankin scale (IQR)	4 (3)	2 (2)	0.022
Radiological features at admission :			
-Space occupying stroke n(%)	13 (19.4)	5 (3.3)	0.004
Etiological features			
-Cardioembolism n(%)	8 (12)	58 (38.4)	0.001
-Atherosclerosis n(%)	14 (21)	38 (25.2)	0.739
-Intracranial n(%)	4 (6)	14 (9.3)	0.626
-Extracranial n(%)	10 (15)	24 (16)	0.834
-Dissection n(%)	3 (4.5)	1 (0.7)	0.029
-Small vessel disease n(%)	15 (22.4)	8 (5.3)	0.034
-Cryptogenic n(%)	30 (44.8)	58 (38.4)	0.054
Prognostic features :			
-hemorrhagic transformation n(%)	6 (9)	25 (16.6)	0.068
-Median hospital stay (days (IQR))	5.5 (7)	6 (7)	0.848
-In-hospital mortality n(%)	5 (7.5)	18 (12)	0.562
-Median NIHSS at 3 months (IQR)	2 (4)	4 (9)	0.018
-Median Rankin scale at 3 months	3 (2)	1 (3)	0.016
-Mortality at 3 months n(%)	16 (24)	7 (4.6)	0.018

DISCUSSION

- Our study showed the disparity between less severe NIHSS in PCIS and a poorer outcome. This highlights that NIHSS items do not cover all clinical features of PCIS. More reliable tools of clinical assessment, such as E-NIHSS are necessary [1].
- We found that PCIS are less likely to be cardioembolic and more frequently due to small vessel disease. These findings contrast with those of previous studies and need to be confirmed on larger samples [2].

CONCLUSION Our study determined the distinctive features of PCIS. This may help optimize healthcare provided to these patients.