# CASE REPORT: NEUROSYPHILIS IMITATOR OF ACUTE ISCHEMIC STROKE.

Vasilieva Maria [1,2], Frimu Anastasia [1,2], Cucusciuc Cristina [1,2], Zota Eremei [1,2], Crivroucica Igor [2], Groppa Stanislav [1].

1 "Nicolae Testemitanu" State University of Medicine and Pharmacy, Residency Faculty, Department of neurology no.2, Chisinau, Republic of Moldova
2 Institute of Emergency Medicine, Clinical Department of Neurology, Epileptology and Internal Disease, Chisinau, Republic of Moldova

## Background

40% of patients with syphilis can be affected by the spirochetal invasion of the central nervous system. Neurosyphilis can be presented with stroke signs in 14,09% of patients, and the misdiagnosis rate in such cases can reach up to 80,95% [1-4].

## Objective

Presentation of a diagnostic pathway in case of suspected stroke due to neurosyphilis, with an evaluation of the clinic-imagistic correlation.

## Materials and methods

A case of a 74-year-old patient with ischemic stroke due to meningovascular syphilis will be reported.

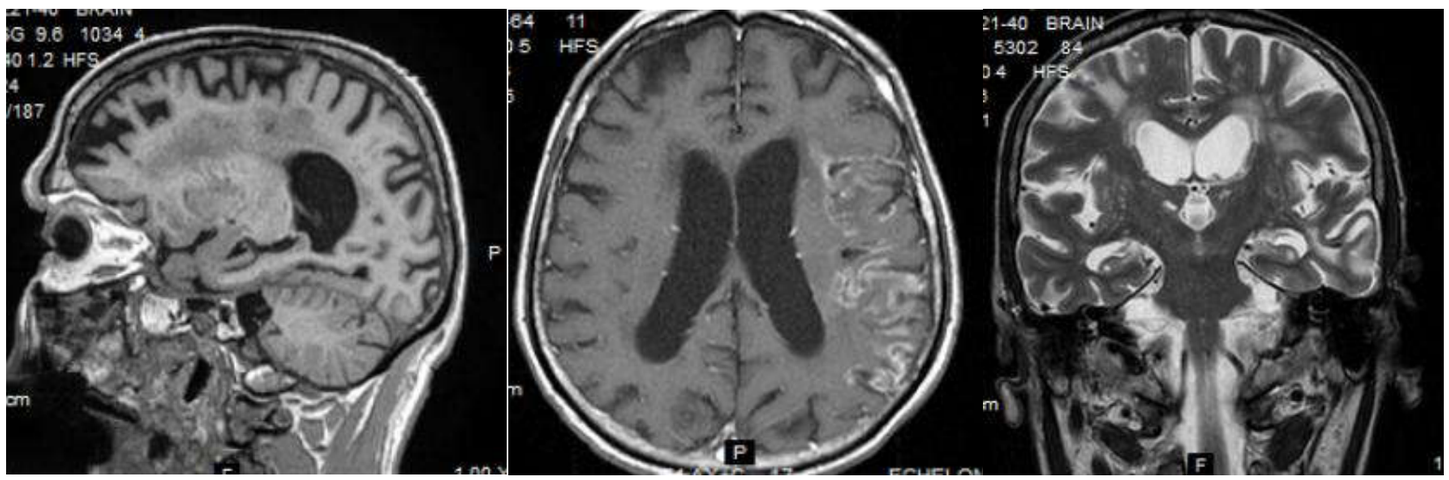

**Fig. 1 Brain MRI**

## Results:

The patient was admitted to the hospital, with sudden onset of speech disturbances, right-side hemiparesis, and neck rigidity.

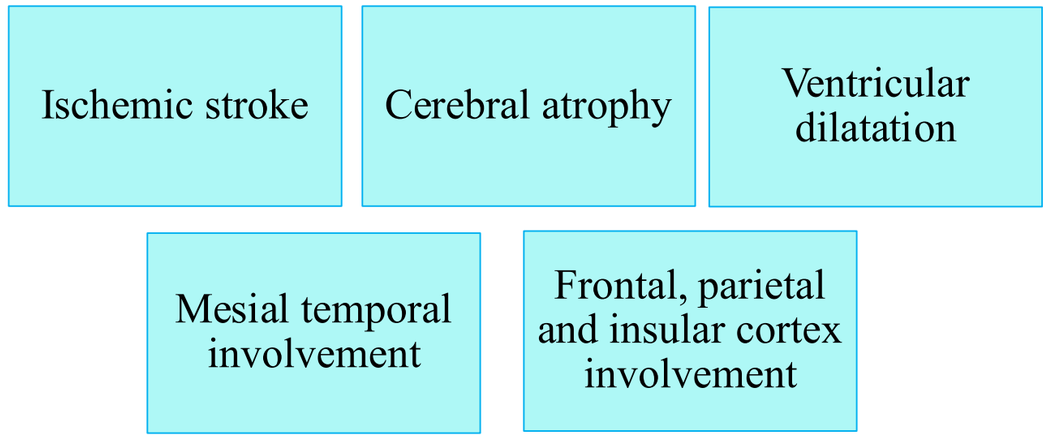


**Fig. 2 Neuroimaging features of neurosyphilis [5-7]**

**Serologic tests for syphilis confirm our suspicions with RPR 4+1:2 and TPHA 4+.**

## Conclusions:

Neurosyphilis can mimic acute ischemic stroke, presented by similar clinical signs and neuroimaging findings; the serological tests are crucial for diagnosis. Due to the fact that therapeutic approaches differ in case of neurosyphilis, DD is very important.

## References

1. Zhang K, Chu F, Wang C, Shi M, Yang Y. Progressive Stroke Caused by Neurosyphilis With Concentric Enhancement in the Internal Cerebral Artery on High-Resolution Magnetic Resonance Imaging: A Case Report. Front Neurol. 2021 Aug 30;12:675083.
2. Liu LL, Zheng WH, Tong ML, et al. Ischaemic stroke as a primary symptom of neurosyphilis among HIV-negative emergency patients. *J Neurol Sci* 2012;317:35–9.
3. Green J, Savage N, Jenkins C, Chima-Okereke C. Lesson of the month 1: Neurosyphilis mimicking viral encephalitis and ischaemic stroke. Clin Med (Lond). 2019 May;19(3):252-254
4. Marra C, Baker-Zander SA, Hook EW 3rd, Lukehart SA. An experimental model of early central nervous system syphilis. J Infect Dis. 1991 Apr;163(4):825-9
5. Fadil H, Gonzalez-Toledo E, Kelley BJ, Kelley RE. Neuroimaging findings in neurosyphilis. J Neuroimaging. 2006 Jul;16(3):286-9.
6.Brisset M, Chadenat ML, Cordoliani Y, Kamga-Tallom R, D'Anglejean J, Pico F. Aspect IRM de la neuropsyphillis [MRI features of neurosyphilis]. Rev Neurol (Paris). 2011 Apr;167(4):337-42.
7. Khamaysi Z, Bergman R, Telman G, Goldsher D. Clinical and imaging findings in patients with neurosyphilis: a study of a cohort and review of the literature. Int J Dermatol. 2014 Jul;53(7):812-9.