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### "Crypto Syphilis" Cryptogenic Stroke as the Presentation of Neurosyphilis in Young Adults

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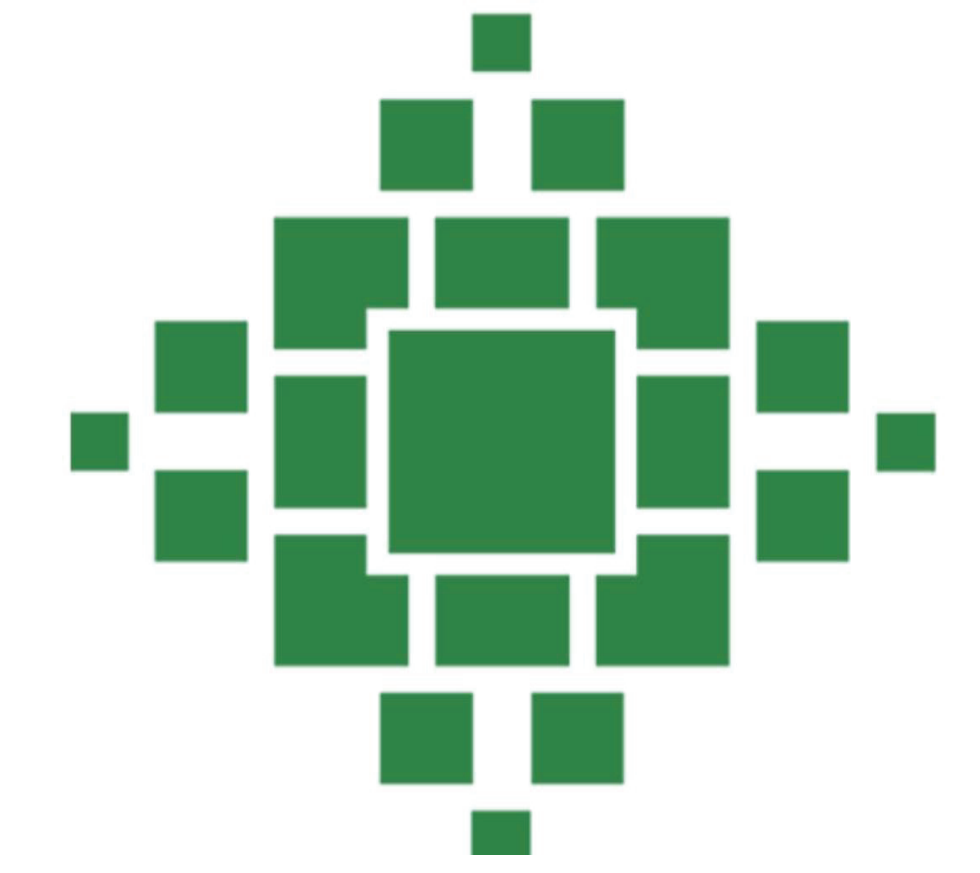
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# "Crypto" syphilis

## Cryptogenic Stroke as the presentation of neurosyphilis in young adults

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### Background

Strokes in younger adults (ages 18-50) account for 10-15% of all strokes and warrant a thorough workup to determine the underlying cause and identify important risk factors. Here we present a case of a young individual presenting with a stroke who was ultimately diagnosed with neurosyphilis and HIV.

### Case Presentation

A young adult man in his 30s with a history of tobacco and methamphetamine use presented to the emergency department with a three-day history of aphasia, right-sided facial droop, and confusion.

### Initial Work-Up

MRI showed evidence of acute ischemic infarct (Fig 1). An extensive stroke workup was performed, showing normal cholesterol levels, EKG and ECHO. Further work-up revealed elevated anticardiolipin antibodies with a negative lupus anticoagulant. He was started on aspirin and atorvastatin and discharged home on Eliquis.

### Follow-Up Visit

On a subsequent follow-up visit, he was noted to have cervical and inguinal lymphadenopathy and high titers on the rapid plasma reagent (RPR) test. A biopsy of his largest palpable lymph node showed Kaposi Sarcoma (Fig 2). HIV testing was positive. A lumbar puncture demonstrated elevated CSF protein count and positive CSF VDRL, consistent with neurosyphilis.

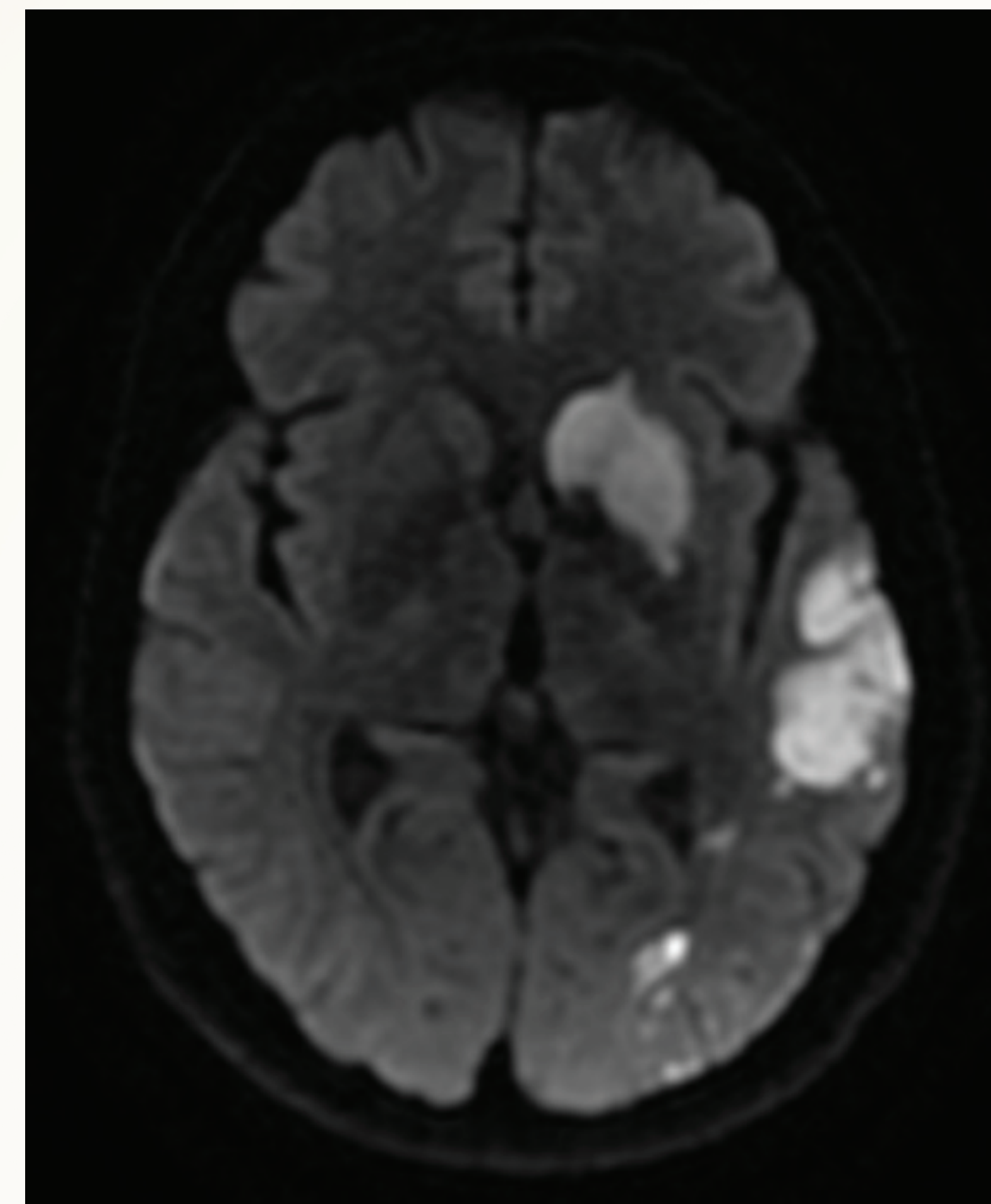


Figure 1. Initial MRI

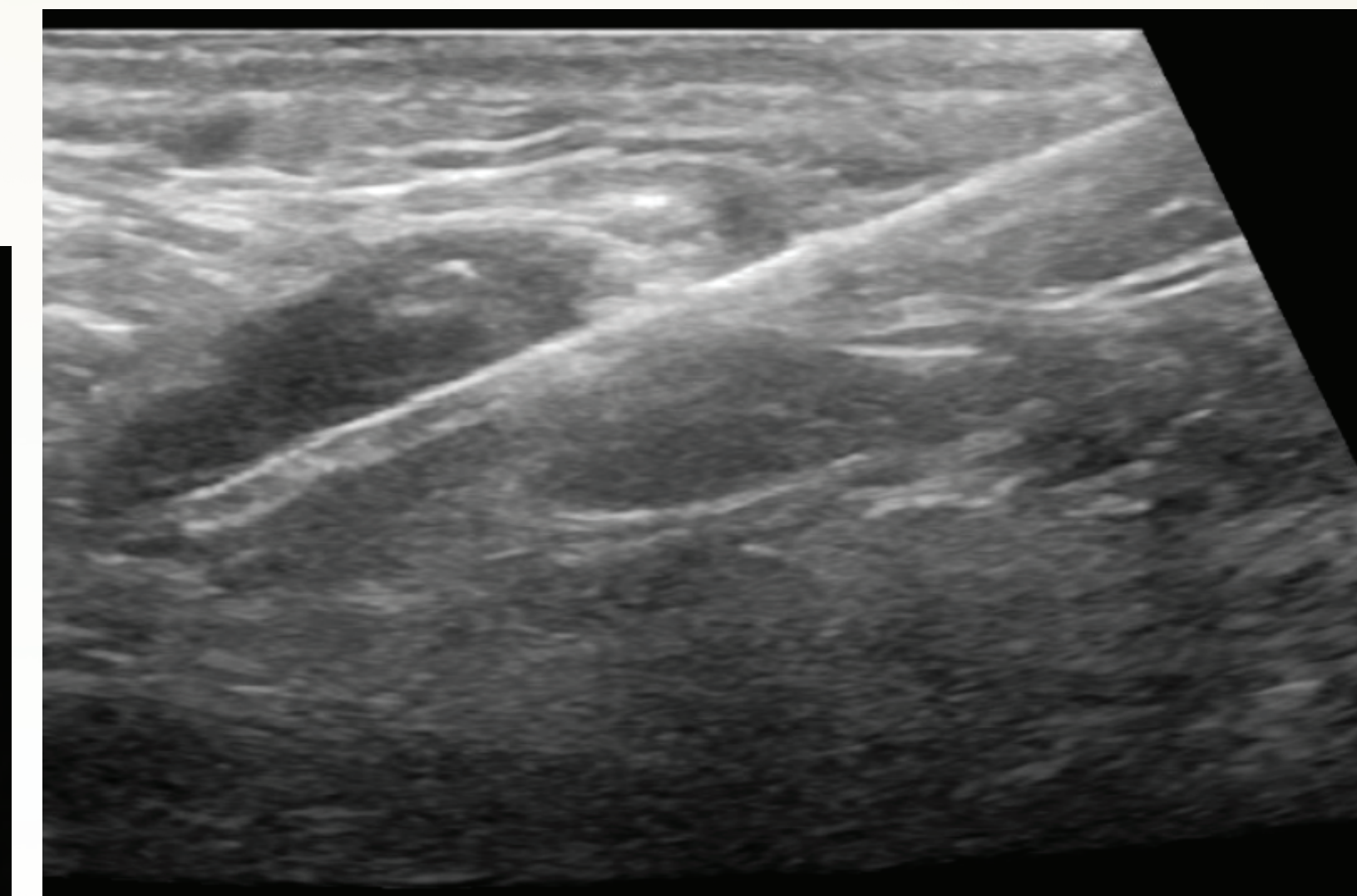


Figure 2. Ultrasound guided Biopsy of submandibular lymph node

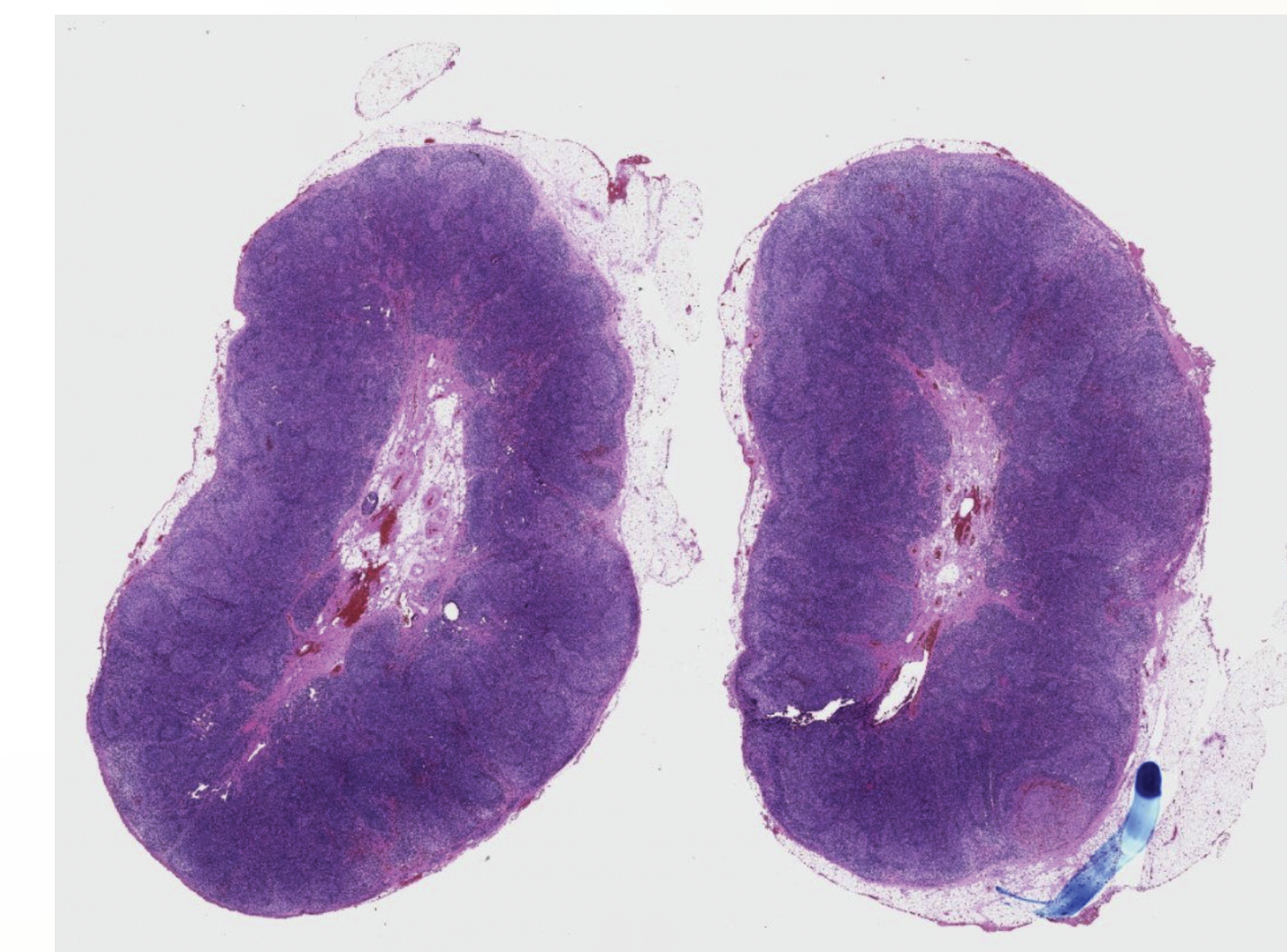


Figure 3. Pathological smear of submandibular lymphnode

The patient was treated for Kaposi Sarcoma and neurosyphilis and began HAART treatment for HIV. The patient's condition greatly improved, and he is now under long-term follow-up. His anti-phospholipid antibody positivity was a false positive due to syphilis, and so his anticoagulation has been discontinued.

### Learning Points

- This case illustrates the **importance of physical examination** and the need to keep a **broad differential in young patients presenting with acute stroke**.
- This patient had neurosyphilis, a rare cause of stroke that should be considered in all patients, especially young patients lacking standard modifiable risk factors.
- Meningovascular syphilis has been associated with large vessel involvement, most frequently middle cerebral artery (MCA) followed by basilar artery and small to medium intracranial vessel involvement. This may result in subsequent cerebral artery occlusions due to thrombosis and vessel occlusion that may lead to ischemic strokes [1,2,3].
- Strokes can occur in approximately 15% of untreated patients with neurosyphilis [3].
- This case underscores the importance of considering neurosyphilis in the evaluation of young patients with no known vascular risk factors.

### References

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