

ECCMID CLINICAL GRAND ROUNDS

40-year-old man with stroke

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Case report

40-year-old man was referred to emergency neurological department at 9.00 a.m. because of sudden onset of:

6:00 a.m.

- **paraesthesia in the left side of the body including face**
- **tinnitus in the left ear**
- **unsteady gait**

PREVIOUSLY HEALTHY

NO MEDICATION

Physical examination

GENERAL

- Alert, oriented
- T 37.1° C
- BP 124/74
- P 80
- O2 sat 98%
- No meningeal signs
- No lymphadenopathy
- Lungs: clear
- Heart: regular rate and rhythm
- Abdomen: soft, nontender, normal bowel sounds

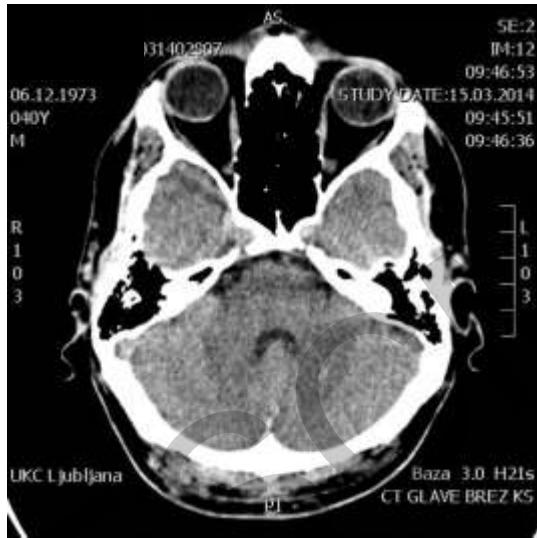
Neurological examination

- Severely ataxic gait
- Right side facial and abducens palsy
- Left side hemi-paraesthesia

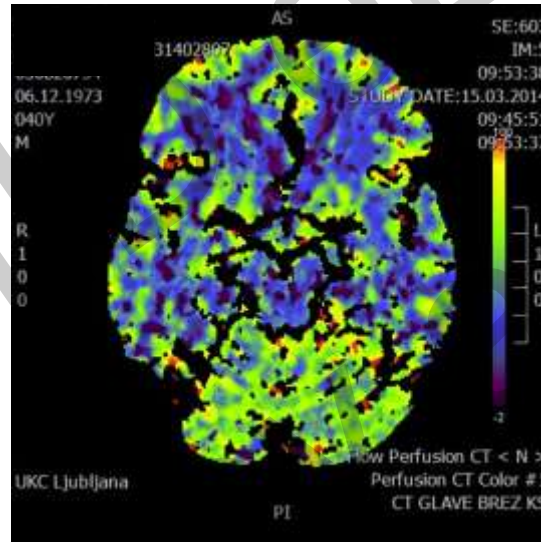
Laboratory tests

- **Full Blood Count** → normal
- **Electrolytes** → normal
- **Liver and kidney function tests** → normal
- **CRP** → normal
- **Coagulation tests** → normal
- **Blood glucose** → normal

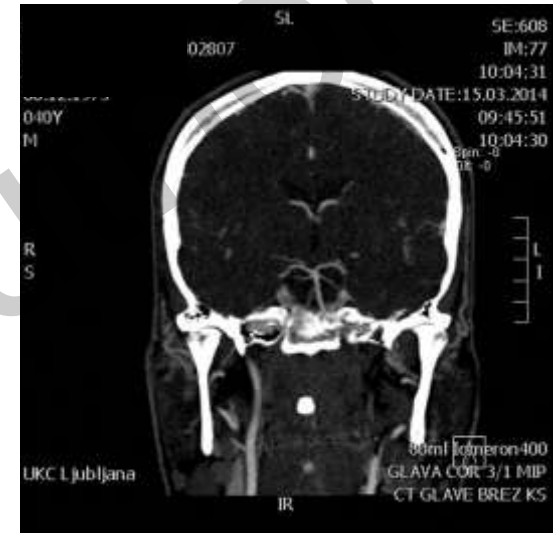
Neuroimaging



Head CT



Cerebral
perfusion CT



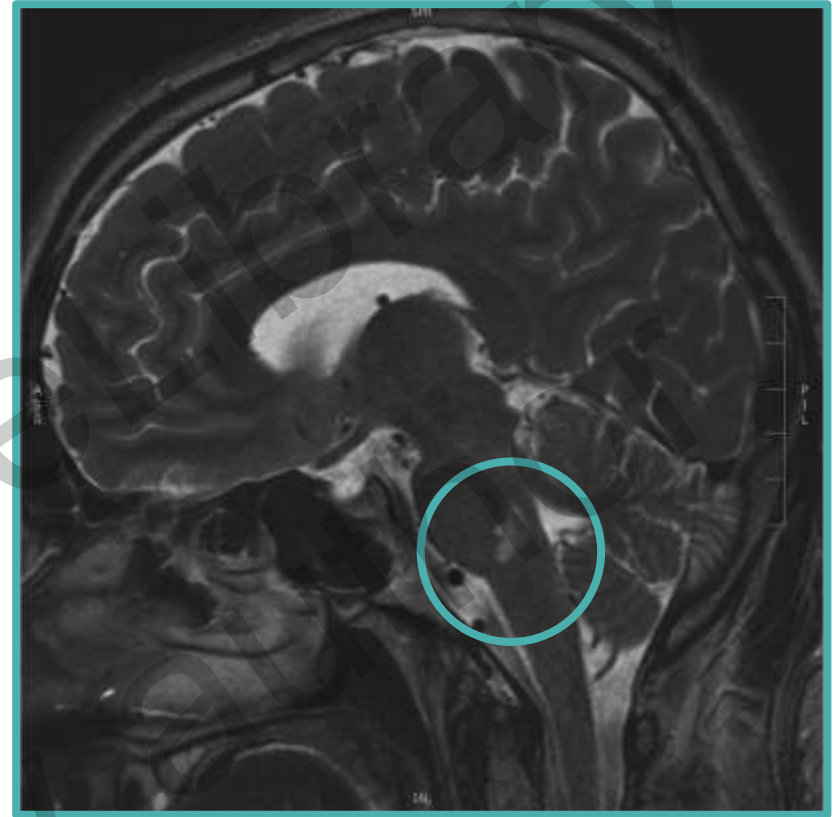
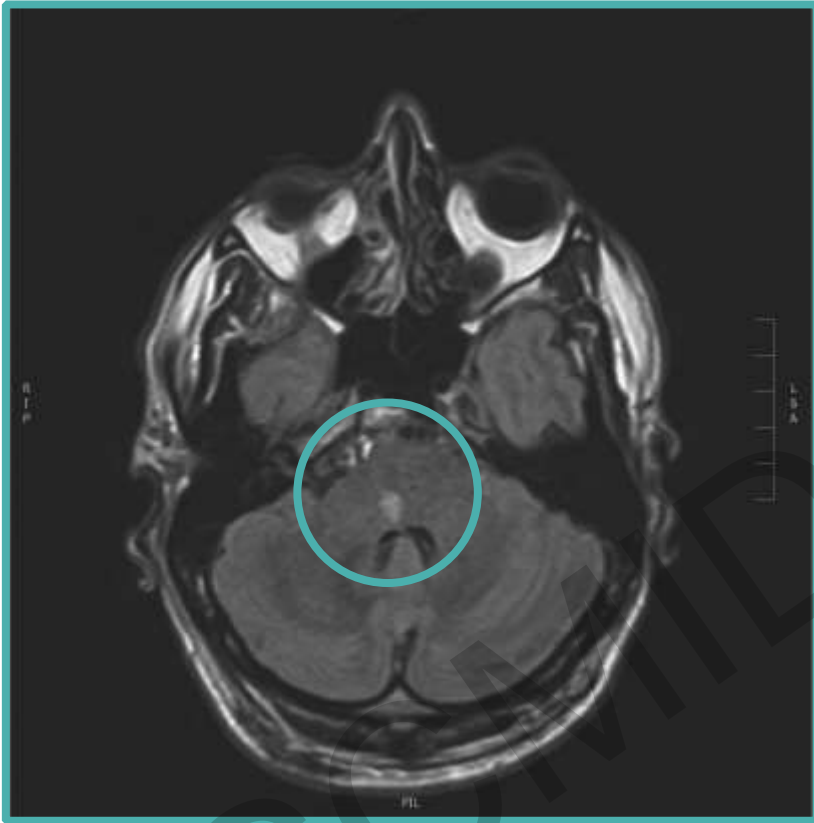
CT Angiography

N O R M A L

Working diagnosis

Stroke or TIA in the right brainstem

- symptoms started to improve
- Aspirin
- no thrombolytic drugs



Brain MRI: Right posterior pontine infarction (9 x 4 mm)

Panel differential diagnosis

ESCMIID © by author

Lumbar puncture

Elevated protein level and lymphocytic pleocytosis

- **Leukocytes** 30/ μ L (< 5/ μ L)
Lymphocytes 30/ μ L
- **Glucose** 2,7 mmol/L (2.2-3.9 mmol/L)
- **Proteins** 0,70 g/L (0.2-0.4 g/L)

Panel differential diagnosis

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Slovenia

Differential Diagnosis

- Vasculitis
- Neuroborreliosis
- Viral meningitis
- Thrombophilic disorder
- Tuberculous meningitis

Routine tests for stroke in young patients (under 50 yrs)

- Screening blood tests for thrombophilia: normal
- Screening blood tests for rheumatological disorders: normal
- Vitamin B12 and folic acid level: normal
- Blood Thyroid hormones (TSH, T4, T3): all normal
- Serological tests for *B. burgdorferi*: negative
- CSF bacterial and fungal cultures: negative
- CSF-PCR: JC virus, HSV 1,2, VZV, EBV, CMV: negative
- CSF *C. neoformans* Ag: negative

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- HIV screening and confirmatory tests: **positive**

HIV RNA 9480 copies/ml

CD4+ 282/mm³

- Screening tests for syphilis

RPR 1:128

TPHA 1:10240

Panel differential diagnosis

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NEUROSYPHILIS ?



CSF-Syphilis

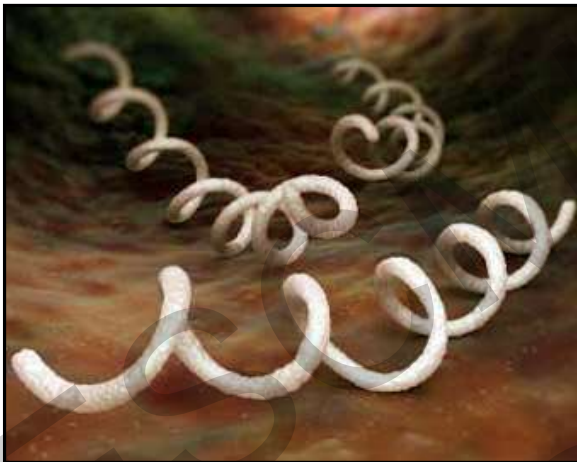
RPR neg

TPHA neg



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Additional test for syphilis



CSF:

LIA (*Line immunoassay*)
antibodies

- ↑ sensitivity and specificity

POSITIVE

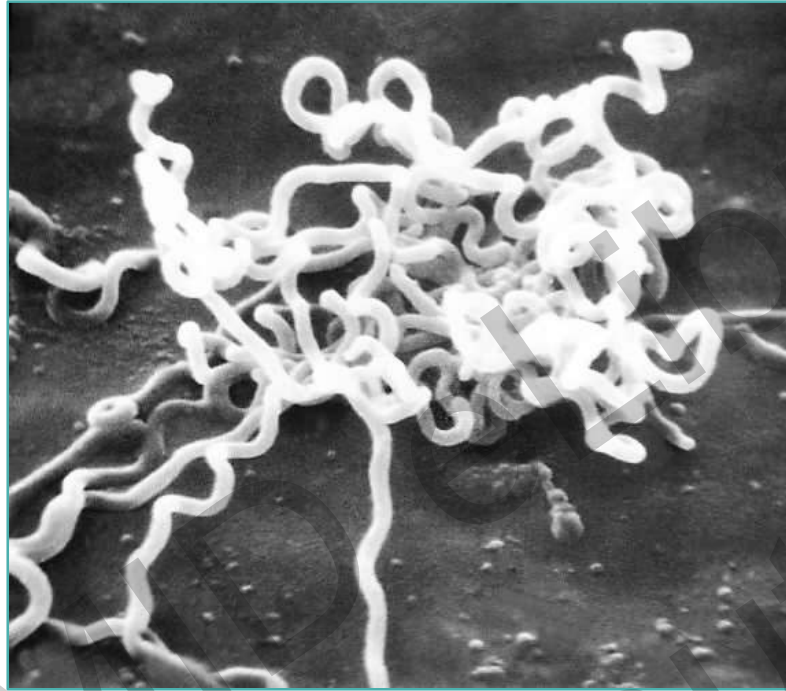
Diagnosis, Treatment, Outcome

Diagnosis Meningovascular syphilis and HIV coinfection

Treatment

- Intravenous benzylpenicillin for 21 days
- Antiretroviral therapy (darunavir, ritonavir, abacavir, lamivudine)

Outcome Clinical improvement with minimal neurological sequelae



He who knows syphilis, knows medicine

William Osler