

Arterial ischemic stroke as a rare early complication of varicella in children

Margarida Alcaface¹, Rita Silva², Carla Conceição³, Maria João Brito¹, José Pedro Vieira²

¹Pediatric Infectious Diseases Unit, ²Pediatric Neurology Department, ³Neuroradiology Department
Head of Department Gonçalo Cordeiro Ferreira
Hospital Dona Estefânia. CHLC - EPE, Lisbon, PORTUGAL

Correspondence:
margarida.alcaface@gmail.com

INTRODUCTION Post varicella arterial ischemic stroke (AIS) is rare and usually a late complication, although it has been reported within the first week of illness. The anterior cerebral circulation and the basal ganglia are commonly affected.

In Portugal, anti-varicella vaccine is commercialized but isn't included in the national vaccination programme.

CASE REPORT

3 year-old ♂
β-thalassemia major
Bone marrow allotransplant previous year
Under cyclosporine treatment
No varicella immunization before transplant

VARICELLA

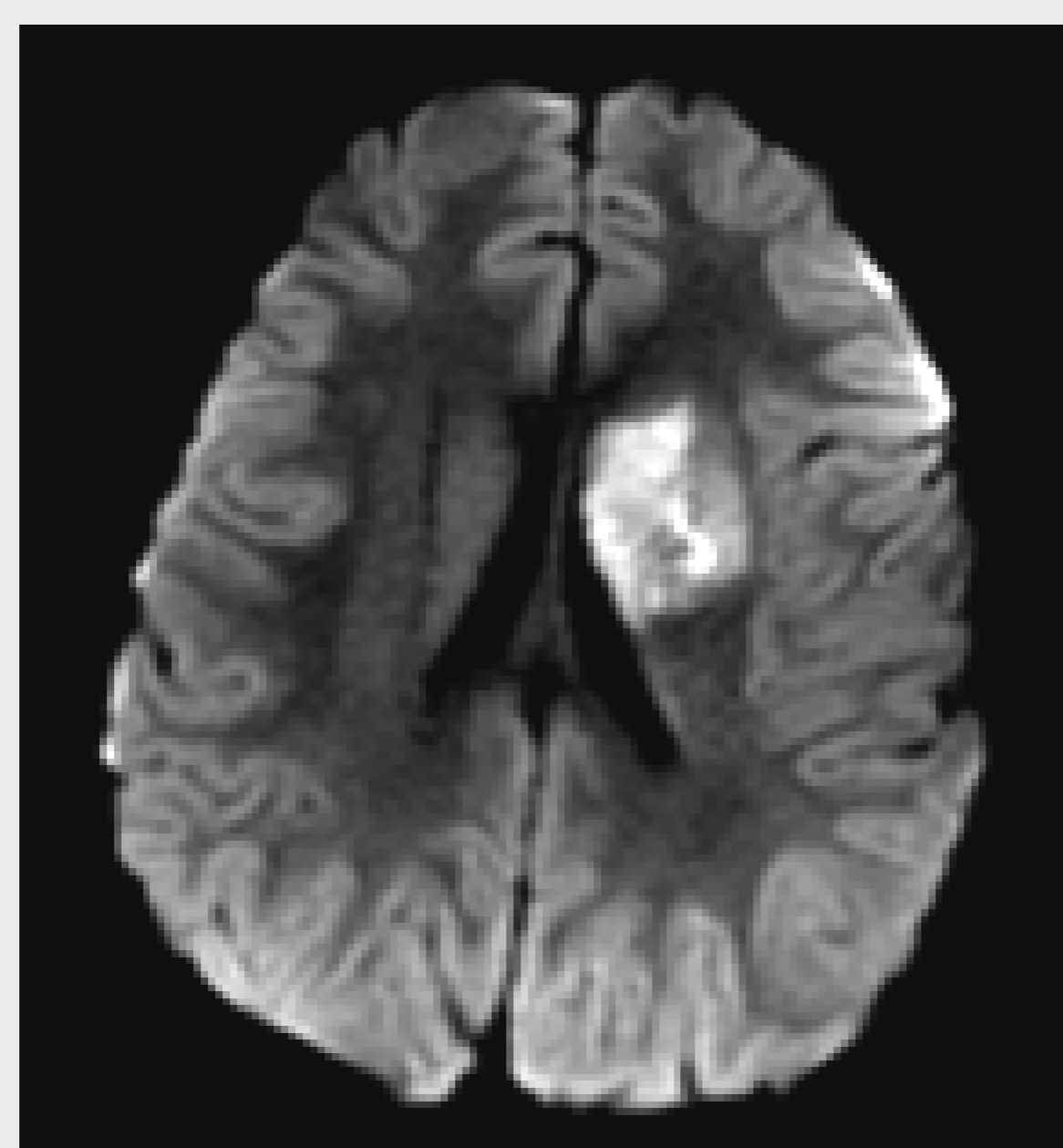
At day 2:

Ataxia
Speech alterations

Neurological examination:

Acute right hemiparesis
Right upper-limb dystonia and hyperreflexia
Right-sided central facial paralysis

STROKE



EARLY NEUROLOGIC COMPLICATION OF VARICELLA!

- ▶ **Lumbar puncture**
Limpid cerebrospinal fluid
Normal cytochemical exam (leucocytes 1.6/uL, glucose 76.9 mg/dL, proteins 20.9 mg/dL)
Negative culture
Positive PCR for varicella-zoster virus (VZV)
- ▶ **Transcranial / cervical Doppler** – normal
- ▶ **Electroencephalography** – normal
- ▶ **Cardiologic evaluation** – normal
- ▶ **Pro-thrombotic study**
Anti-β2-glycoprotein1
IgG- IgM+ (205 U/mL)
Anti-cardiolipin
IgG+(21.4GPL/mL), IgM+ (71.7MPL/mL)
Lupus anticoagulant +
All negative 12 days later

TRANSIENT ANTIPHOSPHOLIPID SYNDROME

- ▶ **Cranial MRI basal ganglia infarction** in the territory of the perforating branches of the left middle cerebral artery

TREATMENT

Acyclovir iv 1500 mg/m²/day (21 days)
Dipyridamole PO 4mg/kg/day (6 months)



6 MONTH FOLLOW-UP

- ▶ Residual right hemiparesis and dystonia, mainly brachial
- ▶ Normal Griffiths coefficient
- ▶ Normal speech evaluation
- ▶ Normal audiological evaluation

Acetylsalicylic acid 2,5 mg/Kg/day
Physiotherapy
Occupational therapy

CONCLUSIONS

- In immunocompromised patients with VZV vasculopathy, the gap between rash and neurological signs may be smaller with positive VZV-DNA in cerebrospinal fluid. Most of these events occur within 12 months after varicella infection.
- The transient antiphospholipid syndrome was secondary to the underlying infection and did not represent a pro-thrombotic risk factor, since it wasn't verified later in the post infection period.
- Hypertonia, hyperreflexia and dystonia are uncommonly symptoms of cerebral infarction in the acute stage; therefore obtaining history of recent varicella and performing a cranial MRI are crucial to the diagnosis.