Case presentation We report a 2.5 year-old Caucasian female who presented with sudden onset right- hemiplegia and irritability. She had minor head trauma earlier that day but no loss of consciousness. She had a history of recurrent upper respiratory tract infections, fatigue, poor diet and constipation over the preceding months but no recent illnesses. These symptoms followed a trip to Rwanda where she had a bout of gastrointestinalitis. Blood tests were noteworthy for a reduced Haemoglobin of 6.4 g/dl with a repeat Hb of 5.7 g/dl (normocytic, normochromic), reduced reticulocyte count of 3.9 and platelet count of 614 but normal liver function. Borelia, Varicella, Mycoplasma and Parvovirus B19 serology were negative.

CT Brain was normal. A time-of-flight MR angiography of the circle of Willis showed diffuse ischaemia within the cortex of the left cerebral hemisphere involving the frontal, parietal and occipital lobes. No large vessel occlusion or haemorrhage were seen, and intracranial and extracranial carotid and vertebral arteries were normal. Echo and bubble study was normal.

Abdominal ultrasound showed a calculus in the neck of the gallbladder without cholecystitis. Repeat Parvovirus B19 IgG was positive.

Discussion Previous case-control studies have suggested that the risk of childhood arterial ischaemic stroke is increased transiently in the context of acute infection. A multi-centre study in 2017 (Vascular effects of Infection in Paediatric Stroke, VIPS) Study found serological evidence of Parvovirus B19 (PVB19) in 6% of cases of childhood arterial ischaemic stroke. Parvovirus B19 is a DNA virus can cause subclinical infection or manifest with flu-like symptoms. Infection is typically mild, but complications can include chronic anaemia.

It has been hypothesised in previous studies that Parvovirus may injure cardiac and arterial endothelium, promoting thrombus or arterial stenosis. However, it is worth noting that neither stenosis nor thrombus were detected in our patient.

Conclusion Parvovirus B19 is an important consideration in cases of stroke in children in particular in the context of reticulocytopenia and normocytic normochromic anaemia.