

Endovascular mechanical thrombectomy for superior sagittal sinus thrombosis in a patient with T-lymphoblastic lymphoma treated with L-asparaginase

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DESCRIPTION

A 32-year-old woman was diagnosed with T-lymphoblastic lymphoma/T-lymphoblastic leukaemia (ALL) while 20 weeks pregnant. She underwent termination of pregnancy (TOP) and commenced phase 1 ALL induction therapy following the UKALL14 protocol (off-trial) with daunorubicin, vincristine and dexamethasone. Pegylated-asparaginase was initially omitted in view of thrombotic risk, with additional catch-up doses administered when more than 6 weeks post-TOP. She subsequently achieved a complete metabolic remission by positron emission tomography-CT and bone marrow minimal residual disease negativity by flow cytometry.

During cycle 3 consolidation, 10 days following the last dose of pegylated-asparaginase, she presented with refractory generalised tonic-clonic seizures requiring induction of anaesthesia, intubation and mechanical ventilation. Magnetic resonance venography (MRV) confirmed thrombosis of the superior sagittal sinus and frontal cortical veins (figure 1), with secondary infarction and haemorrhage (demonstrated on parenchymal imaging). Despite commencing unfractionated heparin with anti-Xa activity within the therapeutic range and antithrombin activity over 70%, she developed progressive seizures and hemiparesis with further secondary haemorrhage. She therefore proceeded to endovascular mechanical thrombectomy, following which she has made an excellent recovery with normal

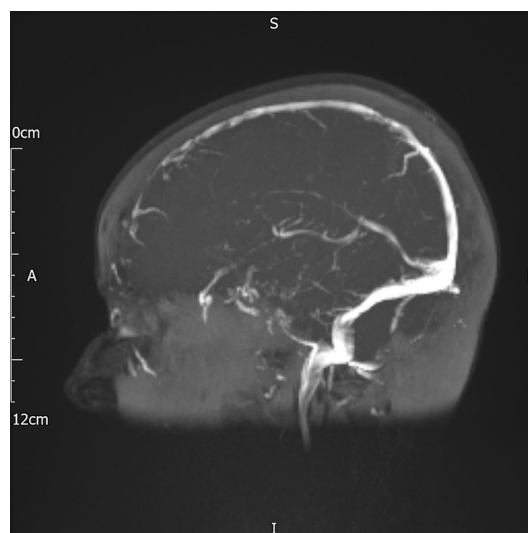


Figure 2 Cerebral magnetic resonance venogram demonstrating recanalisation of the superior sagittal sinus.

cognitive function and only mild residual weakness. Repeat MRV after 1 month demonstrated venous recanalisation (figure 2).

Learning points

- Cerebral venous sinus thrombosis is a well-recognised complication in patients with T-lymphoblastic lymphoma/T-lymphoblastic leukaemia receiving L-asparaginase, with an ongoing risk outside the induction period.
- Although anticoagulation is the mainstay treatment, endovascular mechanical thrombectomy is increasingly being used for refractory patients, with an excellent outcome in this case.

Contributors AB wrote the manuscript. CF was the consultant responsible for the patient's care. AM performed the endovascular mechanical thrombectomy. All authors read and approved the final version of the manuscript.

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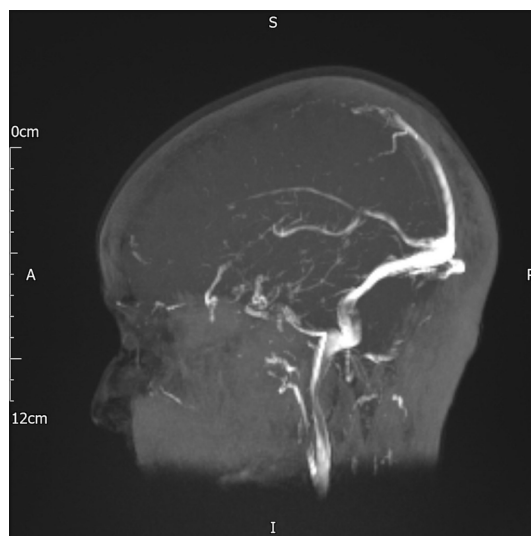


Figure 1 Cerebral magnetic resonance venogram demonstrating absent flow in the superior sagittal sinus.



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