Anesthetic management of an adult with failing Fontan physiology is complicated given inherent anatomical and physiological alterations. Neurosurgical interventions including thromboembolectomy may be particularly challenging given the importance of blood pressure control and cerebral perfusion.

Case presentation: We describe a 29 year old patient born with double outlet right ventricle (DORV) with mitral valve atresia who after multi-staged surgeries earlier in life, presented with failing Fontan physiology. She was admitted to the hospital almost 29 years after her initial surgeries to undergo workup for a dual heart and liver transplant in the context of a failing Fontan with elevated end diastolic pressures, NYHA III heart failure symptoms, and liver cirrhosis from congestive hepatopathy. During the workup in the context of holding anticoagulation for invasive procedures, she developed a middle cerebral artery (MCA) stroke requiring a thromboembolectomy via left carotid artery approach. DISCUSSION AND CONCLUSIONS: This case posed many challenges to the anesthesiologist including airway control, hemodynamic and cardiopulmonary monitoring, evaluation of perfusion, vascular access, and management of anticoagulation in an adult patient in heart and liver failure with Fontan physiology undergoing thromboembolectomy for MCA embolic stroke ¹⁾.

1)

Eden C, Clifford H, Wang A, Mohammed A, Yim P. Carotid approach to anterior circulation thromboembolectomy in an adult with failing fontan physiology: a case report. BMC Anesthesiol. 2021 May 18;21(1):151. doi: 10.1186/s12871-021-01364-z. PMID: 34006242.

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