Supplemental Table 1: Case Reports of Intravenous or Intra-arterial Thrombolysis for Pregnant Women with Acute Ischemic Stroke

| **Author, year** | **Age****(years)** | **Gestational Age****(weeks)**  | **Thrombo-lytic RX** | **Signs/****Symptoms** | **Associated** **Comorbidities** | **Imaging** | **Additional Anti-coagulants** | **Potential Complications** | **Mode of Delivery** | **Maternal Outcome** | **Fetal Outcome**  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Dapprich,** **2002 1** | 31  | 12 weeks | **IV rt-PA** | Right-sided hemiplegia and globalaphasia |   | CCT scan showed early hypodensity of the leftbasal gangliaTranscranial color duplex sonography (TCD) showed occlusion of the main stem of the left MCA | Secondary prophylaxis with low doseaspirin & LMWH  | MRI scan showedHemorrhagic transformation ischemic infarction of the left basal ganglia | VD | Near complete recovery | Healthy term  |
| **Elford,** **2002 2** | 28  | 1 week | **IA t-PA** | Left hemiplegia, dysarthria, left facial paralysis, drowsiness, NIHSS=11BP: 100-115/50-65 | Severe ovarian hyperstimulation syndrome, no evidence of thrombophilia  | CT showed subtle ischemic changes in right cerebral artery distribution + posterior aspect of right basal ganglia Angiography 4 hours after stroke onset: complete occlusion of right M1 segment of MCA  | Discharged on low dose dalteparin thenstopped 2 months before delivery | Right basal ganglia hematoma | VD  | At 3 months: Mild left inferior quadrantanopia, slight left leg sensory change, slight difficulty ambulating | Healthy term  |
| **Weatherby, 2003 3** | 29  | 9 weeks | **Direct thrombolysis with tPA x2** | Bilateral papilloedemaand a left sided hemiparesisGlasow Coma Score: 8  |  | Initial urgent CTshowed increased attenuation ofthe superior sagittal sinus, withsome cerebral oedema. MRI/MRV showed absence of flow | Discharged on Fragmin (low dose) | None | VD | Full recovery | Healthy term  |
| **Johnson,** **2005 4** | 39  | 37 weeks  | **IA rt-PA** | Left sided hemiplegia, left homonomous hemianopsia with left-sidedneglect, dysarthria, and left facial droop.NIHSS=20BP: 200/100 | Hx of chronic hypertension, untreated | Angiography: occlusion of middle M1 segment of the MCA | Discharged on LMWH  | None | Forceps VD under epidural analgesia  | At 2 months:Neuro-logically normal  | Healthy term |
| **Leonhardt,** **2006 5** | 26  | 23 weeks | **IV rt-PA** | Dense right hemiparesis  | Elevated IgGand IgM anti-cardiolipin antibodies | Diffusion weighted MRI showedhyperintensity of left basal ganglia and occlusionof the MCA M1 segment | SQ LMWH  | None | VD | Transferred to rehabilitation facility with extremity weakness  | Healthy premature |
| **Wiese,** **2006 6** | 33  | 13 weeks | **IV rt-PA** | Right sided hemipareis, expressive aphasia, normal vital signsNIHSS=13 | Prosthetic mitral valve thrombosis, recent delivery 6 months prior with gestational diabetes  | Noncontrast head CT: hypodensities in left caudate, putamen, anterior limb of internal capsule, left frontal horn effacement | Therapuetic enoxaparin  | None | Repeat CD | Transferred to rehabilitation facility and improved to NIHSS=4 | Healthy term  |
| **Murugappan,****2006 7** | 37  | 12 weeks | **IV rt-PA** | NIHSS=19 | MVR embolism | Right MCA occlusion | N/A | IntrauterineHematoma | N/A | Healthy | Medical termination of pregnancy  |
| **Murugappan,****2006 7** | 31  | 4 weeks | **IV rt-PA** | N/A | Decreasedprotein Sactivity | Left MCA occlusion | N/A | None | N/A | Healthy | Medical termination of pregnancy  |
| **Murugappan,****2006 7** | 29  | 6 weeks | **IV rt-PA** | NIHSS=13 | Aortic Valve Replacement embolism | Right MCA occlusion | N/A | N/A | N/A | Death from dissection during angioplasty | Death (potentially unrelated)  |
| **Murugappan,****2006 7** | 43  | 37 weeks | **IA rt-PA** | NIHSS=25 | Anti-thrombin III, protein C and Sdeficiencies | Left MCA occlusion | N/A | None | N/A | Healthy | Healthy  |
| **Murugappan,****2006 7** | 28  | 6 weeks | **IA urokinase** | N/A | Protein Cand Sdeficiencies,patent foramen ovale | Basilar occlusion | N/A | Buttock hematoma managed conservatively  | N/A | Healthy  | Healthy |
| **Murugappan, 2006 7** | 40 | 6 weeks | **Local urokinase** | N/A | Polycythemia rubra vera, essential thrombolysis | Superior sagittal sinus thrombosis | N/A | Partial recanalization | N/A | Healthy  | Fetal demise, chromosomal abnormality |
| **Murugappan, 2006 7** | 21 | 8 weeks | **Local urokinase** | N/A | + dilute Russel viper venom test | Cerebral venous thrombosis | N/A | Enlargement of IVC-related hemorrhage | N/A | Healthy | Medical termination of pregnancy |
| **Murugappan, 2006 7** | 25 | First trimester | **Local urokinase** | N/A | Bacterial endocarditis | Left MCA occlusion  | N/A | Asymptomatic | N/A | Healthy | Spontaneous abortion |
| **Yamaguchi, 2010 8** | 36  | 18 weeks | **IV rt-PA** | Aphasia and right sided hemiparesis and decreased sensationRight lip droopNIHSS=6 | Hashimoto disease (Embolic stroke) | MRI: Occlusion of left MCA high intensity areas  | Treated with aspirin x 4 months and heparin until delivery | None | VD at 39 weeks | Recovery within a few hours  | Healthy term  |
| **Li,** **2012 9** | 24  | #1. 11 weeks#2. 13 weeks | **IA rt-PA** | Dysarthria, hemiparesis,hemisensory lossNIHSS=13BP: 120/751 week later: facial numbness with normal neurologic exam  | PFO large right to left shuntPulmonary arteriovenous malformation | #1. Ischemic stroke in left MCA#2. 1 week later: Ischemic infartion vertebral basilar territory | Enoxaparin and aspirin  |  | VD | Resolution of deficits, mild drift in right arm Discharged with mild facial droopPersistent right to left shunt | Healthy term  |
| **Tassi,** **2013 10** | 28  | 16 weeks  | **IV rt-PA** | Motor aphasia, hemiparesis, and right sided hypoesthesiaNIHSS=20  | PFO large right to left shuntFactor V Leiden MTHFR C667T gene | MRI/MRA showed signs of ischemia in the left cerebral hemisphere from ipsilateral MCA subocclusion | Aspirin | None | VD | At 24 hours: NIHSS =1, with slight motory aphasia | Healthy term  |
| **Hori,****2012 11** | 35  | 13w3d | IV rt-PA | Left homonymous hemianopsiaLeft hemiparesis NIHSS=5 | Suspected embolic sources | MRI: Right posterior cerebral artery occlusion | Started on IV heparin thenwarfarin at 15 weeks | None | CD under General Anesthesia at 38weeks | Left homonymous inferior quadrantanopia 4 days after rt-PADiagnosed with protein S deficiency, needs lifelong anticoagulation | Healthy  |
| **Ritter,** **2014 12** | 32  | 36 weeks | **IV rt-PA** | Dysphasia, dysarthria, right-sided hemianopia, neglect, dense right-sided hemiplegia,hemisensory loss.NIHSS=22Glasgow coma scale: 14 | Migraine with aura | CTA Head: occlusion of the left lower M2 segment with infarction of the left posterior insula and inferior temporallobe  | Aspirin was started and continued until delivery and changed to Clopidogrel | None | CD | Mild residual right sided hemiplegia but fully independenet in all activities of daily living  | Healthy term  |
| **Ritchie,** **2015 13**  | 28  | 39 weeks | **IV rt-PA** | Left-sided hemiparesis and impaired sensation, left-sided facial weakness andtongue deviationNIHSS=11BP: 132/61 | None | CT: No intracranial bleed Post-thrombolysis MRI: lacunar-type stroke (LACS) of right MCA | Aspirin until delivery, and clopidogrel and prophylactic tinzaparin postpartum | None  | Induced forceps VD | 8 months: full recovery | Healthy term  |
| **Tversky,** **2016 14** | 31  | 5 weeks | **IV rt-PA** | Slurredspeech, mild right hemiparesis, hemisensory lossNIHSS=5 | Hx of ischemic stroke with prior pregnancyDocumented protein C and S deficienciesDiscontinued recommended LMWH PFO right to left shuntDocumented DVT | CT: unremarkable (clinical diagnosis of stroke) Post-thrombolysis MRI: left thalamic and internal capsularinfarct | Discharged on daily LMWH  | None | N/A | At hospital day 2: neurologic symptoms resolved | N/A |
| **Festa,****2017 15** | 37  | 5 weeks | **IV rt-PA** | Left sidedHemiplegiaNIHSS=8 | Hypertension, obesity(BMI = 38), hx of rheumatic fever, spontaneous abortion in her 20th week of pregnancy5 months earlier Presumed embolic etiology from aortic valve | MRI showed restricted diffusion in the right MCA territory without signal alteration in the T2 sequences or mismatch in the perfusion study | Aspirin, then LMWH  | None  | Scheduled CD | 3 months: modified Rankin Scale Score was 1Mild sensory deficit | Healthy term  |
| **Khan,** **2017 16** | 33  | 9 weeks | **IV rtPA** | Right-sided hemiparesis, hemisensory loss,dysarthria, homonymous hemianopia | Hx of 11 miscarriagesSubstance use disorderSmoker | Non-contrast CT-brain: no intracerebral haemorrhage or space occupying lesion Repeat CT-brain post-thrombolysis demonstrated aposterior cerebral infarct | Aspirin then long term clopidogrel | Trans-vaginal Ultrasound revealed a 9 week fetal pole with hemorrhage; no heart beat  | Dilation and curettage  | At discharge:mild fine motor discoordination, mild dysarthria and right homonymous hemianopia  | First trimester loss  |
| **Jiang,** **2018 17** | 26  | 31 weeks | **IV rt-PA** | Right-sided hemiparesisand mild slurred speechNIHSS=6 | Hx of rheumatic fever Systolic mitral murmurMitral regurgatation and prolapse on echocardiogram | CT: unremarkable clinical diagnosis of clinical strokePost- thrombolysis CT: multifocal small intracerebralhemorrhages in left cerebellar hemisphere and right temporal cortexMRI: multiple bilateral acute infarcts in the right caput nuclei caudati, left basal ganglia, and left corona radiatacorresponding to multiple cardioembolism.  | LMWH then long-term warfarin therapy | None | VD | Fully independent, with no deficits | Healthy term |
| **Landais,** **2018 18** | 32  | 13 weeks | **IV rt-PA** | Aphasia without motor deficitNIHSS=3BP: 132/85  | Hx of frequent palpitationsAssumed cardioembolic origin of stroke | MRI diffusion weightedsequences: increased signal in the superficial territory of the left MCAPrior stroke in the right MCA | Aspirin later switched to LMWH before delivery; then Coumadin postpartum | None | VD | Full recovery with only slight aphasia | Healthy term |

AVM= arteriovenous malformation; BMI= body mass index; BP=blood pressure; CD=cesarean delivery; CT/CTA= computed tomography/computed tomography angiography; DVT= deep vein thrombosis; Hx=history; IA= intra-arterial; IV rt-PA=intravenous recombinant tissue plasminogen activator; IV= intravenous; LMWH= low molecular weight heparin; MCA= middle cerebral artery; MRI/MRA= magnetic resonance imaging/magnetic resonance angiography; N/A= not available; NIHSS= National Institutes of Health Stroke Scale; PFO= Patent foramen ovale; SQ= subcutaneous; VD= vaginal delivery

Supplemental Table 2: Case Reports of Thrombectomy for Pregnant Women with Acute Ischemic Stroke

| **Author, Year**  | **Age****(years)**  | **Gestational****Age** | **Symptoms** | **Associated Comorbidities** | **Imaging**  | **Anti-coagulation** | **Mode of Delivery**  | **Maternal Outcome**  | **Fetal Outcome** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Aaron, 2016 19** | 24  | Third trimester | Acute left hemiplegia, neglect, altered sensoriumNIHSS=20 | Prior Mitral Valve Replacement for rheumatic heart disease; on oral anticoagulant changed to LMWH  | MRI: infarct involving the right lateral lenticulostriate territoryMRA: abrupt cut-off of the proximal Right MCA | Oral anticoagulation switched to LMWH before delivery and restarted on oral anticoagulation postpartum  | VD | At discharge:NIHSS=1 At 6 months: Rankin score =0 | Healthy term |
| **Aaron, 2016 19** | 28  | 37 weeks | Sudden dense left hemiplegia, drowsy NIHSS=21 | Severe intrauterine growth retardation Prior mitral stenosis, mitral valve replacement Recent oral anticoagulant changed to LMWH | MRI: infarct involving the right putamen on the DWI and ADC. Cut off the right MCA in the proximal M1 segment | Oral anticoagulation switched to LMWH before delivery and restarted on oral anticoagulation postpartum  | Emergency CD with spinal anesthesia | At discharge:NIHSS=4 At 6 months:slight disability; unable to carry out all previous activities, but mostly independent | Healthy term |
| **Bhogal, 2017 20** | 38  | 24 weeks | Global aphasia with deviated gaze to the left; complete right-sided hemiplegia; hemianaesthesiaNIHSS=15 | Previous substance use disorderPatent foramen ovale | CT: hyperdensity along left MCAMRI: restricted diffusion of left lentiform nucleus and insular cortex, no demarcation of cortical MCA territory | Before delivery:Aspirin and clopidogrel Peripartum:heparin Postpartum aspirin clopidogrel  | Emergent VD | At 8 years later: mild residual paresis of the right hand  | Healthy term |
| **Bhogal, 2017 20** | 36  | 25 weeks | Unconscious  | Hx operative reconstruction of ascending aorta after type A dissection | CT/CTA: distal occlusion of the basilarartery but no definite infarction | AltepaseAspirin and prasugrel | N/A | At discharge:No residual neurologicalsymptoms apart from mild internuclear ophthalmoplegia | N/A |

ADC= Apparent Diffusion Coefficient; BP=blood pressure; CD=cesarean delivery; CT/CTA= computed tomography/computed tomography angiography; DWI= Diffusion Weight Imaging; Hx= history; LMWH= low molecular weight heparin; MCA= middle cerebral artery; MRI/MRA= magnetic resonance imaging/magnetic resonance angiography; N/A= not available; NIHSS= National Institutes of Health Stroke Scale; VD= vaginal delivery

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