ADULT MEDICAL EMERGENCIES: STROKE / CVA WITHOUT MSTU ACCESS

E	EMT
A	AEMT
P	PARAMEDIC
M	MED CONTROL

UNIVERSAL PATIENT CARE PROTOCOL

AIRWAY PROTOCOL

OXYGEN

CAPNOGRAPHY PROCEDURE

IV PROCEDURE- 2 Large Bore in AC if Possible

For possible TPA admin at receiving facility

Check Blood Glucose Level

Prehospital Stroke Assessment

12 Lead EKG Procedure
1ST Contact to EKG and Transmission < 10 Min

S & S of Stroke / CVA Less Than 12 Hours in Duration?

Positive Cincinnati Pre-Hospital Stroke Screen?

OR

Negative Cincinnati Pre-Hospital Stroke Screen with continued suspicion of Stroke?

Perform MEND and if POSITIVE Consider Transport to Comprehensive Stroke Center (CSC)

Is Blood Pressure
Systolic > 220 or Diastolic > 120?

Yes

LABETALOL (TRANDATE)
10 mg IVP SLOW over 2 min

STOP Bradycardia,CHF, Asthma
⚠ DO NOT GIVE IF HR <60
⚠ Consult with destination MD prior to administration

10 – 15 Min Post Administration
Recheck BP – Is Systolic Still > 220 or Diastolic > 120

Yes

LABETALOL (TRANDATE)
20 mg IVP SLOW over 2 min

STOP Bradycardia,CHF, Asthma
⚠ DO NOT GIVE IF HR <60
⚠ Consult with destination MD prior to admin

Do not delay transport to appropriate facility to conduct MEND

Do not reduce BP by more than 20% or 185/110

Negative Cincinnati Pre-Hospital Stroke Screen?

Refer to appropriate protocol and continue patient treatment and transport to appropriate facility

Supportive Care
Reassess

TRANSPORT to appropriate facility
CONTACT receiving facility
CONSULT Medical Direction where

ADULT MEDICAL EMERGENCIES: STROKE / CVA WITH MSTU ACCESS

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CAPNOGRAPHY PROCEDURE

IV PROCEDURE- 2 Large Bore in AC if Possible

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Check Blood Glucose Level

Prehospital Stroke Assessment

12 Lead EKG Procedure
1ST Contact to EKG and Transmission < 10 Min

S & S of Stroke / CVA Less Than 12 Hours in Duration?

Negative Cincinnati Stroke Scale

Notify Mobile Stroke Transport Unit of negative Cincinnati Prehospital Stroke Scale and cancel the Mobile Stroke transport unit

Refer to appropriate protocol and continue patient treatment and transport to appropriate facility

Supportive Care
Reassess

Reduce Blood Pressure with Labetalol (Trandate) to 185 systolic or 110 diastolic but NOT GREATER than 20% Overall from Baseline

If Mobile Stoke Transport Unit response location will cause a response time greater than 10 min, then cancel Mobile Stroke Transport Unit and transport patient to the appropriate stroke hospital

TRANSPORT **to appropriate facility**
CONTACT **receiving facility**
CONSULT **Medical Direction where indicated**

Positive Cincinnati Stroke Scale

-Notify Mobile Stroke Transport Unit of Positive Cincinnati Prehospital Stroke Scale
-Obtain responding location of Mobile Stroke unit after proper patient assessment
-Continue Assessment and necessary treatment and extrication while waiting on Mobile Stroke Unit

Is Patient SBP > 185?
Review Inclusion / Exclusion Criteria

Review Blood Pressure
Obtain 2 Readings – 1 Each Arm

Is Blood Pressure
Systolic > 220 or Diastolic > 120 ?

No

Yes

LABETALOL (TRANDATE)
10 mg IVP SLOW over 2 min

STOP Bradycardia,CHF, Asthma
⚠ DO NOT GIVE IF HR <60
⚠ **Consult with destination MD prior to admin**

10 – 15 Min Post Administration
Recheck BP – Is Systolic Still > 220 or Diastolic > 120

Yes

LABETALOL (TRANDATE)
20 mg IVP SLOW over 2 min

STOP Bradycardia,CHF, Asthma
⚠ DO NOT GIVE IF HR <60
⚠ **Consult with destination MD prior to admin**

ADULT MEDICAL EMERGENCIES: STROKE / CVA-Cont.

PEARLS and KEY POINTS

HISTORY	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
• Previous CVA, TIA's • Previous cardiac / vascular surgery • Associated diseases: diabetes, hypertension, CAD • Atrial fibrillation • Medications (blood thinners) • History of trauma	• Altered mental status • Weakness / paralysis • Blindness or other sensory loss • Aphasia • Syncope • Vertigo / dizziness • Vomiting • Headache • Seizures • Respiratory pattern change • Hyper / hypotension	• See Altered Mental Status • TIA (transient ischemic attack) • Seizure • Hypoglycemia • Stroke • Thrombotic • Embolic • Hemorrhagic • Tumor • Trauma

DOCUMENT THE LAST KNOWN WELL TIME & TIME FOUND WITH SYMPTOMS
OBTAIN A POINT OF CONTACT FOR RECEIVING HOSPITAL IF PATIENT CANNOT COMMUNICATE

Tale 3. Cincinnati Prehospital Stroke Scale

Facial Droop
Normal: Both sides of face move equally
Abnormal: One side of face does not move at all

Arm Drift
Normal: Both arms move equally or not at all
Abnormal: One arm drifts compared to the other

Speech
Normal: Patient uses correct words with no slurring
Abnormal: Slurred or inappropriate words or mute

MEND EXAM—*PERFORM EN ROUTE IF TIME ALLOWS*		✓ IF ABNORMAL	
MENTAL STATUS	Level of Consciousness (AVPU)		
	Speech (repeat "You can't teach an old dog new tricks')		
	Questions (age, month)		
	Commands (close, open eyes)		
CRANIAL NERVES	Facial Droop (show teeth or smile)	R	L
	Visual Fields (four quadrants)	R	L
	Horizontal Gaze (side to side)	R	L
LIMBS	Motor—Arm Drift (close eyes and hold out both arms)	R	L
	Motor—Leg Drift (open eyes and lift each leg separately	R	L
	Sensory—Arm and Leg (close eyes and touch, pinch)	R	L
	Coordination—Arm and Leg (finger to nose, heel to shin)	R	L

ADULT MEDICAL EMERGENCIES: STROKE / CVA-Cont.

- *Onset of symptoms is defined as the last witnessed time the patient was symptom free. (i.e. awakening with stroke symptoms would be defined as an onset time of the previous night when patient was symptom free)*
- *The differential diagnosis listed on the Altered Mental Status Protocol should also be considered.*
- *Elevated blood pressure is commonly present with stroke. Treat only if systolic is > 220 and / or diastolic is > 120 mmHg and signs **and** symptoms of stroke are present.*
- *Treat chest pain / discomfort per ACS protocol.*
- *Treat pulmonary edema per CHF / Pulmonary Edema protocol.*
- *Be alert for airway problems (swallowing difficulty, vomiting, diminished or absent gag reflex).*
- *Hypoglycemia can present as a localized neurological deficit, especially in the elderly.*
- *Patients who experience transient ischemic attack (TIA) develop most of the same signs and symptoms as those who are experiencing a stroke. The signs and symptoms of TIA' s can last from minutes up to one day. Thus the patient may initially present with typical signs and symptoms of a stroke, but those findings may progressively resolve. The patient needs to be transported, without delay,to the most appropriate hospital Document the time of onset for the symptoms, or the last time the patient was seen "normal" for them.*
- *Reassess neurological deficit every 10 minutes and document the findings. Evidence of neurological deficit includes; confusion, slurred speech, facial asymmetry and focal weakness, coma, lethargy, and seizure activity.*
- *Hypertensive emergencies are life threatening emergencies characterized by an acute elevation in blood pressure AND end-organ damage to the cardiac, CNS or renal systems. These crisis situations may occur when patients have poorly controlled chronic hypertension or stroke.*
- *Blood pressures MUST be taken bilaterally and be similar, contact Medical Control if they vary more than 20 mmHg.*
- *Accurate BP's are key to this protocol. Verify automated BP readings with manual cuff.*
- *Document pts GCS score.*
- *Check patient's pupils and rule out head trauma.*
- *All symptomatic patients with hypertension should be transported with their head elevated.*
- *If the patient becomes hypotensive from Labetalol (Trandate) administration, place the patient in the trendelenburg position and administer a normal saline bolus.*
- *Toxic ingestion such as cocaine, may present as a hypertensive emergency.*
- *Hypertension can be a neuroprotective reflex in patients with increased intracranial pressure.*