

“Code Dose” tPA

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Situation

- For patients with acute suspected or confirmed Pulmonary embolism (PE) our current process does not allow for the expedited administration of Alteplase (tPA) to this patient.

Background

- Thrombolytic therapy is a mainstay of Pulmonary Embolism (PE) treatment
- For massive PE, systemic thrombolysis is first line therapy
- Submassive PE may be treated with catheter directed thrombolysis and anticoagulation

Assessment / Recommendation

- By collaborating with our pharmacy colleagues, we will be able to expedite this administration of tPA to this specific patient population.
- Starting September 6th RN's within the CVICU will have access to a single dose 50 mg alteplase accompanied with 50 mL of sterile water
- RN's will be educated on administration of tPA and special considerations.

PE and Cardiac Arrest

Recommendations for Pulmonary Embolism		
COR	LOE	Recommendations
2a	C-LD	1. In patients with confirmed pulmonary embolism as the precipitant of cardiac arrest, thrombolysis, surgical embolectomy, and mechanical embolectomy are reasonable emergency treatment options.
2b	C-LD	2. Thrombolysis may be considered when cardiac arrest is suspected to be caused by pulmonary embolism.

Panchal AR, Bartos JA, Cabañas JG, et al; Adult Basic and Advanced Life Support Writing Group. Part 3: Adult basic and advanced life support: 2020 American Heart Association guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation*. 2020;142(16)(suppl_2):S366-S468. doi:10.1161/CIR.0000000000000916

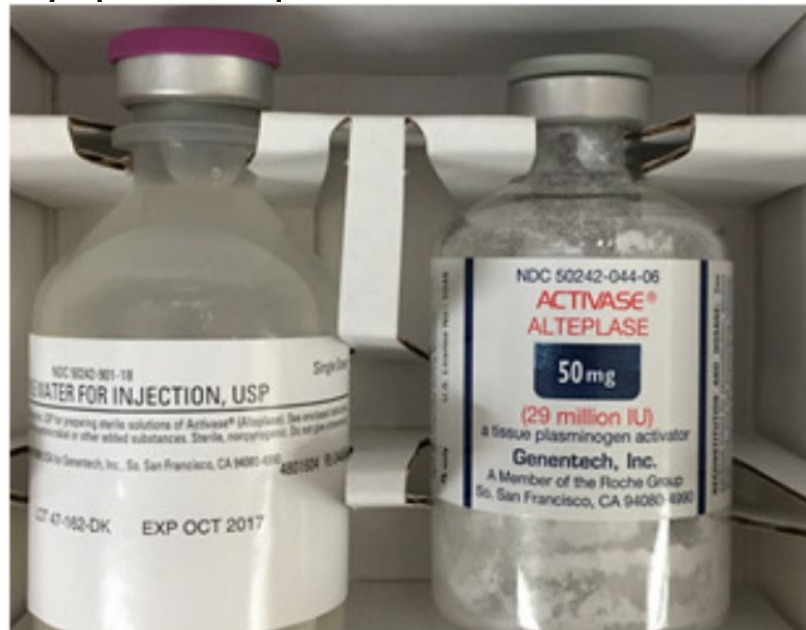
- “Code Dose” tPA:
Alteplase 50mg IVPush with continuous CPR for at least 15 minutes
- PEAPETT Trial:
23 patient case series utilizing 50mg alteplase for cardiac arrest with confirmed or suspected PE

20/23 patients survived to 22 ± 3 month follow-up

Time from CPR start to tPA was 6.5 ± 2.1 minutes

Alteplase Logistics

- Stored room temperature in a box/kit
- Box includes two vials
 - 50mL Sterile water for injection (SWFI)
 - 50mg alteplase lyophilized powder



Alteplase Logistics

- To Administer:
 - Withdraw 50mL SWFI from designated vial
 - Inject SWFI into powder vial
 - Swirl vial, do not shake
 - Draw back up into syringe, administer to patient
- The dose to be administered is the entire vial
- The dose should be administered as quickly as possible. Does not need central access. Time to administration is the key point here.

After Alteplase Administration

- After you administer the tPA, you must do 15 minutes of continuous CPR. This is so the drug can be circulated.
- You will still follow ACLS protocol and do pulse checks/shock accordingly, but CPR must then be resumed
- If the patient achieves ROSC, stop CPR....