Monitoring requirements include vital signs, neuro checks, and assuring medication is infusing as planned.

The following slides will cover a brief overview of tPA, details about monitoring, and how to manage potential complications.
What is tPA?

- Tissue plasminogen activator (t-PA) produced by recombinant DNA.
- Alteplase is an enzyme that binds to fibrin in a thrombus and converts the plasminogen to plasmin leading to initiation of local fibrinolysis.
- With dissolution of the clot, blood flow can be restored and viable brain tissue may be reperfused.
What is tPA?

- tPA has been FDA approved since 1996.
- Favorable outcomes have been demonstrated in 31-50% of patients treated with tPA vs. 20-38% treated with placebo.
- Similar benefit noted at 1 year post stroke.
- Number needed to treat 14 (vs. 53 for STEMI)

- 6-8% risk of hemorrhagic transformation post tPA infusion.
- Patients must be selected carefully and monitored closely.
- Plans must be in place to recognize and treat any complications that arise.
Infuse 0.9 mg/kg (max dose 90 mg)
› 10% given as a bolus over 1 minute
› Rest of dose infused over 60 minutes (using the glass vial, vented tubing and a pump)

In report from referring be sure to note:
› patient’s dose,
› time bolus was given,
› time the infusion hung,
› expected time for completion,
› and be prepared to hang 50 mL normal saline flush bag.
Neuro assessment & vital signs are to be monitored and documented every 15 minutes for 2 hours (starting from time bolus is given).

Then every 30 minutes for next 6 hours.

And hourly for next 16 hours.

Be sure to document time infusion completed and time flush bag hung, if it occurs on your watch.
Patient monitoring: Neuro checks

- Complete the neuro assess components of your prehospital stroke scale:
  - LAPSS: Face, grip, arms, plus speech & pupils
  - Cincinnati: Face, arms, speech, plus pupils

- You are looking for changes over time, and changes from their baseline.
  - Are their deficits worse than what you received on initial report, the same, or are they getting better?
Call receiving ED physician if:
- SBP > 185 or < 110
- DBP > 105 or < 60
- Pulse > 110 or < 50

Anticipate orders for Labetalol 10mg IV push over 1 to 2 minutes, may repeat every 10 minutes
When would you page the receiving ED?

- Patient develops any of the following:
  - Severe headache
  - Acute hypertension or hypotension
  - Nausea/vomiting
  - Acute mental status change
  - Bleeding from gums, IV sites, petechiae, ecchymosis, abdominal or flank pain, hemoptysis, hematemesis
  - Shortness of breath, rales, rhonchi
  - Dysrhythmias
The literature supports the initiation of IV thrombolysis, using telemedicine support as needed, and transfer to regional stroke centers for further treatment, when indicated.

Data suggests that drip & ship complication rates are comparable to non-drip & ship.

It is considered a safe & effective method that can increase treatment rates in eligible patients and shorten time to treatment.
References


Questions?

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