EMRA/FERNE Case Conference: Legal Issues in the ED Management of Acute Ischemic Stroke Patients

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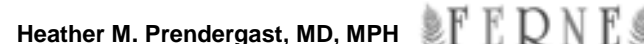

ED Ischemic Stroke Patient Management:

Specific Recommendations to Minimize Liability to the Emergency Care Provider

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EMRA
"Current Concepts in Emergency Care"

Washington DC
May 31, 2008

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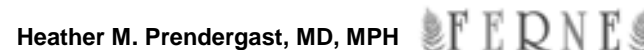

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Ischemic Stroke Patient Case Presentation

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Clinical History

A 62 year old female acutely developed aphasia and right sided weakness while in a store. The store clerk immediately called 911. Paramedics on the scene within 9 minutes, at 6:43 pm. She arrived in the ED at 7:05 pm… completed her head CT at 7:25 pm… and a neurology consult was obtained at 7:35 pm (approximately one hour after the onset of her symptoms).

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ED Clinical Exam

- VS: 98 F, 90, 16, 116/63, 98% RA, 50 kg
- The pt was alert, was able to slowly respond to simple commands. The pt had a patent airway, no carotid bruits, clear lungs, and a regular cardiac exam. PERRL. There was neglect of the R visual field. There was facial weakness of the R mouth, and R upper and lower extremity flaccid paralysis. DTRs were 2/2 on the L and 0/2 on the R.

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The Medical Record

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MR is Like a Kevlar Vest

- It is your greatest source of protection
- It protects you such that it must always be used wisely, as is the case with police officers
- You often don't know when it protects you

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MR is Like a Seeing Device

- You see things that can only be seen as you write up the chart
- You only know fully what you know and what you must do once the record is completed
- It promotes excellence in patient care

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Specific Recommendations Regarding Documentation in the Medical Record

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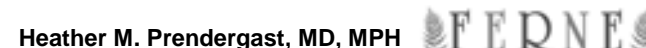

Emergency Medicine Recommendations

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Stroke Pt Diagnosis

- ‘The pt has symptoms that are fixed and are consistent with an acute ischemic stroke’

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Stroke Neurological Exam

- Document a systematic neuro exam, one that could be used to develop an approximate NIHSS
- ‘The approximate NIHSS was 12-18, in the range that suggests that IV tPA may be of benefit as was the case in the NINDS clinical trial’

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Stroke Onset Time

- ‘The ischemic stroke onset time has been confirmed in the following way, suggesting the three hour window for IV tPA has not expired’

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Stroke CT Interpretation

- ‘The CT has been reviewed and has been cleared by the radiologist who is aware of the potential use of IV tPA’

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Blood Pressure Rx

- ‘The blood pressure was stabilized without extraordinary intervention and was consistently less than 185/110, allowing for safe IV tPA use’

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IV tPA Informed Consent

- ‘The following were discussed with the patient and family:
  - With tPA, there is a 30% greater chance of a good outcome at 3 months
  - With tPA use, there is 10x greater risk of a symptomatic ICH (severe bleeding stroke)
  - Mortality rates at 3 months are the same regardless of tPA use, because stroke is a bad disease
  - About two patients will improve for every one that develops a symptomatic ICH’

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IV tPA Informed Consent

- If you document in the medical record, state the specifics
- ‘The following individuals were part of and consented to the decision to use IV tPA’
- If not, use a specific consent form with the data printed on it

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IV tPA Risk/Benefit

- ‘The potential risks and benefits of the use of IV tPA were discussed with the patient and/or family and these discussions lead to the decision to treat (not to treat) with IV tPA’

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IV tPA Contraindications

- ‘The stroke pt was not a candidate for IV tPA because the time of stroke onset was not conclusively determined’
- ‘IV tPA was not indicated because of the presence of AFIB and an approximate NIHSS above 20’
- There were no specific …

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NINDS Protocol Followed

- ‘I am aware of the specifics of the NINDS protocol regarding IV tPA use and followed the protocol in order to maximize the likelihood of a good outcome for this patient’

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tPA Not Clinically Indicated

- ‘IV tPA was NCI in this ischemic stroke patient for the following reasons:
  - Risk/Benefit profile does not suggest improved outcome with IV tPA use
  - Stroke onset time unclear
  - Pt/Family decline use
  - Systems in place do not favor its use’

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ED Systems Recommendations

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Obtain the CT Quickly

- ‘The ED staff and CT techs were informed that the CT for this patient had to be expedited because of the potential use of IV tPA’

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Obtain a CT Read Quickly

- ‘The CT techs and radiologists were informed that the CT reading for this patient had to be expedited because of the potential use of IV tPA’

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Obtain a Directed CT Read

- ‘The CT techs and radiologists were informed that the CT reading for this patient was for the specific purpose of determining if the potential use of IV tPA was appropriate’

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Obtain Consults Early

- ‘The neurologist was notified of the potential use of IV tPA prior to obtaining the head CT so that he could be present in the ED at the time of the decision to administer tPA, if indicated’

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Document Neurologist Agreement with Plan

- ‘The neurologist was fully aware of the circumstances surrounding the use of IV tPA and fully concurred with the decision by the patient, family, and myself’

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Pt, Family Interactions

- ‘Risks and benefits were fully explored with the patient and relatives, leading to the decision to use tPA’

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IV tPA Dosing, Time

- ‘Based on the clearly established time of stroke onset and the estimated (how) pt weight, at 8:21 pm, approx 1’45” after CVA sx onset:
  - Initial bolus: 5 mg slow IVP over 2 min
  - Infusion: 40 mg infusion over 1 hour’

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Avoid Blood Thinners

- Order the following:
- ‘Besides ASA, no additional blood thinners such as coumadin, heparin, or plavix should be administered to this patient because of the use of IV tPA’

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ED Ischemic Stroke Patient Outcome

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Clinical Case: CT Result

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Clinical Case: ED Rx

- CT: no low density areas or bleed
- No contraindications to tPA, BP OK
- NIH stroke scale: approx 18-20
- Neurologist said OK to treat
- tPA administered, no complications

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tPA Administration

- tPA dosing:
  - 8:21 pm, approx 1'45" after CVA sx onset
  - Initial bolus: 5 mg slow IVP over 2 minutes
  - Follow-up infusion: 40 mg infusion over 1 hour

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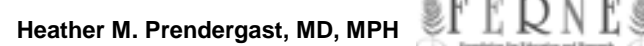
Repeat Patient Exam

- Repeat neuro exam at 90 minutes:
  - Repeat Exam: Increased speech & use of R arm, decreased mouth droop & visual neglect
  - Repeat NIH stroke scale: approximately 12-14

Heather M. Prendergast, MD, MPH 

Hospital Course & Disposition

- Hospital Course: No hemorrhage, improved neurologic function
- Disposition: Rehabilitation hospital
- 3 Month Exam: Near complete use of RUE, speech & vision improved, slight residual gait deficit
- Able to live at home with assistance

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Conclusions

- The IV tPA skill set is identified, limited, and manageable
- It is possible to provide quality emergency care with IV tPA and meet a reasonable care standard
- Identify good patient candidates
- Make it happen quickly
- Document the ED management

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Conclusions

- A high standard is achievable
- The record makes this happen
- Good documentation minimizes risk
- Good documentation enhances likelihood of a good outcome
- Documenting the ED management is a critical step in the Rx plan

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Recommendations

- Do it right!
- Be an expert and demonstrate it by documenting well in the record
- Use IV tPA to treat ischemic stroke patients when indicated ,
- Know the numbers and nuances
- Improve patient care and EM practice
- Do so without excessive risk

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Questions?

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