Community Hospitals Within a Regional Stroke Network can Safely Administer Intravenous Recombinant Tissue Plasminogen Activator (IV r-tPA) in Acute Ischemic Stroke

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INTRODUCTION

Despite FDA approval in 1996, the use of IV r-tPA in acute ischemic stroke remains relatively low (3-4%) partly because of the concerns for symptomatic intra-cerebral hemorrhage (6-12%).

METHODS

A Comprehensive Stroke System of Care was developed in 2010, which included 9 certified stroke centers (Figure 1):

Standardized ED algorithms were implemented throughout TSI Core Network

ED physicians administered IV r-tPA with vascular neurology expertise via Tele-phone or via Camera. IV r-tPA usage was identified based on procedure codes for intravenous thrombolytic administration on in-patient hospital discharges from 2008 to 2012. Symptomatic intra-cerebral hemorrhage was defined based on the ECASS criteria.

RESULTS

TSI Core Network Goals for administration of Intravenous r-TPA were established:

- 100% of the patients will receive the correct rTPA
- 100% of the patients will have their weight documented in kg
- 100% of the patients will receive written r-tPA education
- 100% of the medical records will have a physician order for IV tPA
- 100% of the patients will have their hypertension (> 180/105) or hypotension (< 100/60)

Stroke coordinators tracked the following r-tPA protocol violations:

- Weight in kg (documented)
- Physician Written Order
- Patient and/or family received risks and benefits of IV tPA (Verbal and Written)
- Hyper and Hypotension was managed per protocol
- Thrombolytic Assessment completed
- Dose, time and date are documented in MR for drip and ships.

REFERENCES


CONCLUSION

Community hospitals within a regional stroke network can safely administer IV r-tPA with low rates of symptomatic intra-cerebral hemorrhages comparable to the results of controlled clinical trials.