Implementation of an ED-based Rapid Brain-Attack Triage Algorithm in a Regional Telestroke network positively impacts treatment rates for Acute Ischemic Stroke patients.

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INTRODUCTION

A simplified 2-step ED-based Rapid Brain-Attack Triage Algorithm was developed. The first step includes a non-contrast head CT to distinguish a hemorrhagic stroke from an ischemic stroke. The second step includes identifying the “last known normal (LKN)”. The Texas Stroke Institute Rapid Brain-Attack Triage Algorithm was implemented for all Tele-stroke consultations within the regional stroke network. Data was prospectively collected for a 1-year period from January to December.

METHODS

A simplified 2-step ED-based Rapid Brain-Attack Triage Algorithm was developed. The first step includes a non-contrast head CT to distinguish a hemorrhagic stroke from an ischemic stroke. The second step includes identifying the “last known normal (LKN)”. The Texas Stroke Institute Rapid Brain-Attack Triage Algorithm was implemented for all Tele-stroke consultations within the regional stroke network. Data was prospectively collected for a 1-year period from January to December.

RESULTS

A total of 907 Tele-stroke consultations were performed either via the Telephone or via the Camera. Two-thirds were ischemic stroke patients (603/907; 66.7%) and one-third were hemorrhagic stroke patients (304/907; 33.3%). Among the ischemic stroke patients, 64% (386/603) presented within 12 hours from LKN and 45.3% (175/386) received either intravenous r-tPA and/or catheter based mechanical thrombectomy.

DISCUSSION

A simplified ED-based Rapid Brain-Attack Triage Algorithm as part of a regional Telestroke Network is feasible and helps significantly increase treatment rates in patients with acute ischemic stroke. This system has helped identify patients early and initiates the ER physician to stroke specialist dialog. This team approach, along with labs and imaging, has lead to an increased treatment rate for those patients with acute ischemic stroke syndromes in our network.

REFERENCES

