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Should Neurosurgeons Prescribe IntraVenous-tissue Plasminogen Activator?

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Introduction

Acute ischemic stroke patients have been mostly cared by Neurointensivists(NI). Prescription rates of Intra Venous-tissue Plasminogen Activator (IV-tPA) have been increasing amongst emerging dually trained Neurovascular Surgeons(NS). We report the incidence of IV-tPA prescription between NS versus NI and the subsequent rates of clinically measurable hemorrhagic complication

Methods

Of 5662 patients consulting for acute ischemic stroke symptoms, the medical charts of 855 patients who were recommended IV-tPA, were consecutively reviewed between 2013 and 2016. IV-tPA was dispensed by the on-call physician in our specialized stroke unit. multivariable logistic regression was conducted to control for confounding

Results

From the 855 patients who were recommended IV-tPA, 365(43%) (Average Age=66yo, SD=16) received it, and constituted our study population. 48% were females. 78(21.3%) patients were cared by NS and 287(78.3%) patients were cared by NI. In the first group, the average symptom to needle time(STN) was 65min(SD=5min). 6/78(7.6%) patients received mechanical thrombectomy, only 6(7.6%) patients had a clinically significant hemorrhagic conversion following IV-tPA administration. No subsequent mortality was noted. In the Second group, the average STN time was 103min(SD=10min), 11/287(3.8%) patients received mechanical thrombectomy and only 11/287(3.8%) developed major hemorrhagic complications. 5/11 patients were announced dead. In multivariable logistic regression, physician specialty was not a predictor of hemorrhagic conversion or bad long-term clinical outcome: the average modified Rankin Scale was 0.4(SD=0.5) in the group cared by NS and 0.6(SD=1.0) in the second group cared by NI.

Learning Objectives

Hybrid Neurovascular Surgeons provide a high treatement care for Acute Ischemic Stroke patient

Conclusions

Dually trained Neurovascular surgeons and Neurointensivists provide a comparable standard treatment of care for patients with acute ischemic stroke symptoms presenting to a specialized stroke unit.