Stroke center

Stroke Center treats simple and complex neurovascular disorders by incorporating recent developments in emergency medicine, stroke neurology, microneurosurgery, interventional neuroradiology, stereotactic radiology, neurointensive care, neuroanesthesiology, and rehabilitation neurology.

Stroke center volumes significantly influence efficiency and outcomes in mechanical thrombectomy [1].

A Comprehensive Neurorehabilitation Program Should be an Integral Part of a Comprehensive Stroke Center [2].

A Stroke Center provides comprehensive diagnostic and therapeutic care of patients with disorders of blood vessels of the brain and spinal cord, including:

Ischemic Stroke

Transient Ischemic Attack

Carotid artery Stenosis

Cerebral Hemorrhage

Aneurysms / Subarachnoid Hemorrhage

Vascular Malformations of the Brain

Spinal Vascular Malformations.

According to current Aneurysmal Subarachnoid Hemorrhage Guidelines (aSAH) patients are mostly managed in intensive care units (ICU) regardless of baseline severity. Llull et al. from a Comprehensive Stroke Center in Barcelona assessed the prognostic and economic implications of initial admission of low-grade aSAH patients into a Stroke Unit (SU) compared to initial ICU admission.

They reviewed prospectively registered data from consecutive aSAH patients with a WFNS grade lower than 3 admitted at a Comprehensive Stroke Center between April-2013 and September-2018. Clinical and radiological baseline traits, in-hospital complications, length of hospital stay (LOS) and poor outcome at 90 days (modified Rankin Scale >2) were compared between the ICU and SU groups in the whole population and in a propensity score matched cohort.

From 131 patients, 74 (56%) were initially admitted in the ICU and 57 (44%) in the SU. In-hospital complication rates were similar in the ICU and SU groups and included rebleeding (10% vs 7%, p=0.757), angiographic vasospasm (61% vs 60%, p=0.893), delayed cerebral ischemia (12% vs 12%, p=0.984), pneumonia (6% vs 4%, p=0.697) and death (10% vs 5%, p=0.512). LOS did not differ across both groups [median (IQR) 22 (16-30) vs 19 (14-26) days, p=0.160]. In adjusted multivariate models, the location of initial admission was not associated with long-term poor outcome either in the whole population (OR=1.16, 95%CI=0.32-4.19, p=0.825) or in the matched cohort (OR=0.98, 95%CI=0.24-4.06, p=0.974).

A dedicated SU cared by a multidisciplinary team might be an optimal alternative to ICU to initially admit patients with low-risk aSAH [3].

In a study Sonig et al, used information provided in the Nationwide Inpatient Sample (NIS) to study the impact of transferring stroke patients from one facility to a center where they received some form of active stroke intervention (intravenous tissue plasminogen activator, thrombectomy, or a combination of both therapies).

Patient demographic characteristics and hospital factors obtained from the 2008-2010 acute stroke NIS data were analyzed. Discharge disposition, hospitalization cost, and mortality were the dependent variables studied. Univariate analysis and multivariate binary logistic regression analysis were performed. Data analysis focused on the cohort of acute stroke patients who received some form of active intervention (55,913 of 1,311,511 patients in the NIS).

When overall outcome was considered, transferred patients had a significantly higher number of other-than-routine (OTR, i.e., other than discharge to home without home health care) discharge dispositions ($p < 0.0001$). In multivariate regression analysis including pertinent patient and hospital factors, transfer-in patients had significantly worse OTR discharge disposition ($p < 0.0001$, odds ratio [OR] 2.575, 95% CI 2.341-2.832). Mean hospitalization cost including an intervention was $70,325.11 for direct admissions and $97,546.92 for transferred patients. Transfer from another facility ($p < 0.001$, OR 1.677, 95% CI 1.548-1.817) was associated with higher hospitalization cost. CONCLUSIONS The study showed that hospital cost for acute stroke intervention is significantly higher for a transferred patient than for a direct admission. Moreover, the frequency of OTR discharge was significantly higher among transferred patients than direct admissions. Future strategies should focus on ways and means of transporting patients appropriately and directly to stroke centers [4].

References

1)
Nogueira RG, Haussen DC, Castonguay A, Rebello LC, Abraham M, Puri A, Alshekhlee A, Majjhoo A, Farid H, Finch I, English J, Mokin M, Froehler MT, Kabbani M, Taqi MA, Vora N, Khoury RE, Edgell RC, Novakovic R, Nguyen T, Janardhan V, Veznedaroglu E, Prabhakaran S, Budzik R, Frankel MR, Nordhaus BL, Zaidat OO. Site Experience and Outcomes in the Trevo Acute Ischemic Stroke (TRACK) Multicenter Registry. Stroke. 2019 Jul 18:STROKEAHA118024639. doi: 10.1161/STROKEAHA.118.024639. [Epub ahead of print] PubMed PMID: 31318624.
2)
Bagherpour R, Dykstra DD, Barrett AM, Luft AR, Divani AA. A Comprehensive Neurorehabilitation Program Should be an Integral Part of a Comprehensive Stroke Center. Front Neurol. 2014 Apr 22;5:57. eCollection 2014. Review. PubMed PMID:24795694.
3)
Llull L, Mayà G, Torné R, Mellado R, Renú A, López-Rueda A, Laredo C, Culebras D, Ferrando C, Blasco J, Amaro S, Chamorro Á. Stroke Units could be a valid alternative to Intensive Care Units for low-grade aneurysmal subarachnoid haemorrhage patients. Eur J Neurol. 2020 Sep 22. doi: 10.1111/ene.14548. Epub ahead of print. PMID: 32961609.
4)
Sonig A, Lin N, Krishna C, Natarajan SK, Mokin M, Hopkins LN, Snyder KV, Levy EI, Siddiqui AH. Impact of transfer status on hospitalization cost and discharge disposition for acute ischemic stroke across the US. J Neurosurg. 2015 Oct 9:1-10. [Epub ahead of print] PubMed PMID: 26452123.

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