JoS

Shim et al.   Hospital Volume Threshold of Thrombectomy

Supplementary Table 1. Seven parameters of stroke severity index and its explanation

Descriptions	Explanation	Code system/Codes
Airway suctioning	Suctioning of patient's airway in case of altered mental state /or undergoing anesthesia when patient had ERT procedure	HIRA Code/M0135, M0137
Bacterial sensitivity test	Almost every patients who have shot intravenous antibiotics, they had this test	HIRA Code/B40xx, B413xx, B414x
General ward stay	Relatively mild stroke patients who admitted from emergency department usually go to general ward first	HIRA Code/ABxx
ICU stay	Severe stroke patients who admitted from emergency department almost always go to ICU first	HIRA Code/AJxxx
Nasogastric tube	Severe stroke patients cannot eat orally by themselves, and this tube is usually inserted	HIRA Code/Q2621, Q2622
Osmotherapy	For severe stroke patient whose brain tissue damaged massively, usually osmotherapy prescribed to prevent brain herniation	Main Component Code/14800xBIJ, 148010BIJ, 148011BIJ
Urinary catheterization	Severe stroke patient cannot walk by themselves and usually they void by urinary catheterization	HIRA Code/M0060

"x" means various numbers, from 1 to 9.
ERT, endovascular recanalization therapy; HIRA, Health Insurance Review and Assessment Service; ICU, intensive care unit.

Supplementary Table 2. Parameters for risk adjustment: individual and hospital level

Fields	Name (ICD-10 codes)
Demographics	Age, sex
Risk factor and modified Charlon comorbidity index items	AMI or CHD or CAD (I21, I22, I23, I34, I35) Congestive heart failure (I50) Peripheral vascular disease (I73) Dementia (F00, F01, F02, F03) Chronic obstructive pulmonary disease (J40, J41, J42, J43, J44) Connective tissue disease (L94) Peptic ulcer (K25, K26, K27) Mild liver disease (K73, K74) Diabetes mellitus (E10, E11, E12, E13, E14) Diabetes with end organ disease (E13, E14) Renal disease (N17, N18, N19) Nonmetastatic solid tumor (C41, C46, C47, D00, D01, D02, D04, D05, D06, D07, D09) Leukemia (C91, C92, C93, C94, C95) Lymphoma and multiple myeloma (C81, C82, C83, c84, C85, C86, C90) Metastatic tumor (C77, C78, C79) AIDS (B20, B21, B22, B23, B34, R75) Prior stroke (I63) Transient ischemic attack (G45) Hypertension (I10, I11, I12, I13, I15) Atrial fibrillation (I48) other cardiac disease: DCMP, valvular heart disease, PFO (I42.0, Io5, Q21.10) Extracranial arterial stenosis (I65) Intracranial arterial stenosis (I66) Dyslipidemia (E78)
Severity for ischemic stroke	Stroke severity index (no codes, modelled from other items)
Hospital level items	Teaching hospital or not Geographical location: whether in metropolitan city or not Stroke unit or not Public or private

ICD-10, 10th revision of the International Statistical Classification of Diseases and Related Health Problems; AMI, acute myocardial infarction; CHD, coronary heart disease; CAD, coronary arterial disease; AIDS, acquired immune deficiency syndrome; DCMP, dilated cardiomyopathy; PFO, patent foramen ovale.