INCIDENTAL COSTS OF BLEEDING IN PATIENTS WITH ATRIAL FIBRILLATION WITHIN A LARGE, NATIONAL HEALTH PLAN

Burke J(1), Sanders S(2), Henk H(3)

(1) Community Health Plan of Rochester, Rochester, NY, USA, (2) Boehringer-Ingelheim Pharmaceuticals, Inc., Ridgefield, CT, USA

OBJECTIVES: Patients with atrial fibrillation (AF) are often chronically treated with anticoagulant or antiplatelet drugs for stroke prevention and are especially vulnerable to bleeding. The objective of this retrospective database analysis was to use administrative claims data from a large, national US health care organization to examine the incremental costs of bleeding events in patients with AF. METHODS: Administrative claims data were used to identify patients with AF and bleeding events from January 1, 2002—December 31, 2005 with continuous enrollment for 1 year prior to AF diagnosis. Patients were stratified into 3 sub-cohorts: intracranial hemorrhaging (ICH), major bleeds and minor bleeds. To assess incremental costs, patients with bleeding were matched on age, gender, region, and month of identification to a cohort of patients with AF and no evidence of bleeding. Multivariate analyses were used to estimate the independent incremental costs attributed to bleeding. RESULTS: A total of 127,135 subjects were identified with AF, 39.1% of whom had bleeding events. After applying criteria for continuous enrollment and age (≥18 years), a total of 11,266 patients that had evidence of bleeding were identified (1.8% ICH, 10.8% major bleeds and 87.4% minor bleeds). Compared to matched controls, patients with ICH or major bleed incurred significantly more costs over the 1-year follow-up period. Mean adjusted incremental total costs over the 1-year follow-up period were $258,968 in subjects with ICH and $88,775 in subjects with major bleeds. Patients with minor bleeds did not incur additional costs compared to controls. CONCLUSIONS: Major bleeding associated with AF is associated with significant costs over and above that of AF alone. New strategies that further reduce the risk of bleeding among patients with AF could reduce the cost of their care.

THE DIRECT MEDICAL COSTS OF STROKE IN KOREA

Kim J(I), Rha JH(II), Koo JH(II), Cho KH(II), Kim EG(III), Oh GS(IV), Lee SJ(V), Cha JG(VI), Lee YS(VII), Hwang YCI(II)

IAsan Medical Center, Seoul, South Korea, IIYonsei University Hospital, Incheon, South Korea, IIIEulji General Hospital, Seoul, Seoul, South Korea, IVChonnam National University Hospital, Gwangju, South Korea, VInje University Pusan National University Hospital, Busan, South Korea, VISeongnam University Hospital, Gyeonggi, South Korea, VIIYonsei University Medical Center, Daejeon, South Korea, Yeungnam University Hospital, Daejeon, South Korea, Dong-A University Medical Center, Busan, South Korea, Pilsung Pharmaceuticals Co. Ltd, Seoul, South Korea

OBJECTIVES: This study sought to examine the direct medical costs of stroke based on the actual hospital charge data in the incidence based cohort. METHODS: We obtained the cost data for 884 stroke patients in 8 university hospitals. The cost data targeted for all adult patients (≥19 years) admitted for stroke during 2 month (between November 1 and December 31, 2006) and were assessed for 2 years. The target patients were primarily diagnosed as ‘Subarachnoid hemorrhage’ (69), ‘Intracerebral hemorrhage’ (68), ‘Other nontraumatic intracranial hemorrhage’ (62), ‘Cerebral infarction (63)’, and also categorized by history of stroke; ‘primary stroke (1st onset)’, ‘recurrent stroke’. RESULTS: According to diagnosis distribution, 660 was diagnosed in 123 patients (14%), 161 in 138 patients (18%), 162 in 23 patients (13%) and 163 in 576 patients (65%). During study period, 85 patients (10.5%) were died and 471 patients (53%) were assessed for more than 1 year. The annual average direct medical costs for stroke (160-463) were KRW 8,530,941 for the 1st year of onset, KRW 1,098,316 for the 2nd year of onset. This result indicated that the 1st year of stroke incurred the 1st year direct medical costs which were roughly 89% of the 2 year direct medical costs. We classified the 1st year direct medical costs into hemorrhagic stroke (160-462) were KRW 13,518,895, which were more than double of costs for cerebral infarction (63), KRW 5,863,771. The 2nd year costs were similar; KRW 1,055,934 for hemorrhagic stroke and KRW 1,155,700 for cerebral infarction. METHODS: Data were analyzed by the 2007 Nationwide Inpatient Sample (NIS), which is the largest all-payer inpatient care database in the US. Costing all discharge data from 1044 hospitals in 40 US states, approximating 20% stratified sample of US community hospitals. Using a combination of several ICD-9-CM codes, hospital discharges were classified as those with a primary diagnosis of DVT, primary diagnosis of PE, secondary diagnosis of DVT, secondary diagnosis of PE and secondary diagnosis of DVT and PE. Hospital charges and length of stay were estimated for each of these VTE hospitalizations. RESULTS: Among all 139,541 hospital charges in the US in 2007, 172,731 (1.02%) were primary DVT, 155,281 (0.93%) were primary PE, 402,449 (1.02%) were secondary DVT, 118,537 (0.30%) were secondary PE and 30,473 (0.08%) were secondary DVT and PE. The mean length of stay for discharges with secondary DVT (11.3 days), secondary PE (12.0 days), secondary DVT and PE (14.5 days) was substantially more than for stays with primary DVT (4.9 days) and primary PE (5.8 days). Similarly, the mean (95% CI) total hospital charges for stays with secondary DVT ($73,152; $68,368–$77,935), secondary PE ($80,341; $74,782–$85,900), secondary DVT and PE ($98,205; $93,906–$101,503) was substantially more than for stays with primary DVT and primary PE ($23,771; $22,572–$24,970) and primary PE ($30,478; $28,912–$32,044). CONCLUSIONS: In 2007, the economic burden of VTE in US hospitals was estimated in aggregate at $4.07 billion for primary VTE and $4.65 billion for primary PE hospitalizations. Compared to primary VTE, the inpatient costs were substantially larger for secondary VTE.